# SERVICE MANUAL

# BE-3D CHASSIS

| MODEL | COMMANDER | DEST. | CHASSIS NO. | MODEL | COMMANDER | DEST. | CHASSIS NO. |
|---|---|---|---|---|---|---|---|
| KV-29C2A | RM-862 | Italian | SCC-K05L-A | KV-29C2E | RM-862 | Spanish | SCC-K06L-A |
| KV-29C2B | RM-862 | French | SCC-K01L-A | KV-29C2K | RM-862 | OIRT | SCC-K08T-A |
| KV-29C2D | RM-862 | AEP | SCC-K07L-A | KV-29C2R | RM-862 | OIRT | SCC-K08U-A |

MICROFILM

**TRINITRON® COLOR TV**

**SONY®**

| ITEM MODEL | Television System | Channel Coverage | Colour System |
|---|---|---|---|
| Italian | B/G/H | VHF: E2-E12<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF: A-H, H1, H2<br>UHF: E21-E69 | PAL<br>NTSC3.58/4.43<br>(video input only) |
| French | B/G/H, D/K, L, I | L SECAM VHF: F2-F10 UHF: F21-F69<br>TV CABLE TV (1) VHF: B-Q UHF: S21-S44<br>PAL B/G/H VHF: E2-E12 UHF: E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF: A-H, H1, H2<br>PAL I UHF: B21-B69<br>D/K VHF: R01-R20 UHF: B21-B69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, S42-S46 | PAL, SECAM<br>NTSC3.58/4.43<br>(video input only) |
| AEP | B/G/H, D/K | B/G/H VHF: E2-E12 UHF: S1-S20<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF: A-H, H1, H2<br>D/K VHF: R01-R20 UHF: B21-B69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, S42-S46 | PAL, SECAM<br>NTSC3.58.4.43<br>(video input only) |
| Spanish | B/G/H, D/K | PAL B/G/H VHF: E2-E12 UHF: E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF: A-H, H1, H2<br>D/K VHF: R01-R20 UHF: B21-B69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, S42-S46 | PAL, SECAM<br>NTSC3.58/4.43<br>(video input only) |
| OIRT | B/G/H, D/K | B/G/H VHF: E2-E12 UHF: E21-E69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, M1-M10, U1-U10<br>ITALIA VHF: A-H, H1, H2<br>D/K VHF: R01-R12 UHF: R21-R69<br>CABLE TV (1) : S1-S41<br>CABLE TV (2) : S01-S05, S42-S46 | PAL, SECAM<br>NTSC3.58/4.43<br>(video input only) |

| MODEL | 29C2A | 29C2B | 29C2D | 29C2E | 29C2K<br>29C2R |
|---|---|---|---|---|---|
| Power Consumption | 110W | 108W | 108W | 108W | 108W |

## SPECIFICATIONS

| | |
|---|---|
| Picture Tube | Super Trinitron<br>Approx. 72 cm (29 inches)<br>(Approx. 68 cm picture measured diagonally)<br>110° -deflection |

**Rear/Front Terminals**

**[REAR]**

⇥ 1 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for RGB
- Outputs for TV audio and video signals

⇆ 2/ ⇥ 2, 21-pin Euro connector (CENELEC standard)
- Inputs for audio / video signals
- Inputs for S video
- Outputs for TV audio and video signals (selectable) audio outputs - phono jacks

Woofer terminals : 2-pin DIN

**[FRONT]**

⇥ 3 , Video input - phono jack

⇥ 3 , Audio inputs - phono jacks

⇥ 3 , S video input - 4 pin DIN

🎧 Stereo minijack - headphone jack

| | |
|---|---|
| Sound output | |
| Left/Right | 2x10W (RMS)<br>2x20W (music power) |
| Woofer | 1x20W (RMS)<br>1x40W (music power) |
| Dimensions | 794x567x530 mm approx. |
| Weight | Approx. 46.0 kg (with woofer) |

Supplied accessories
  RM-862 Remote Commander (1)
  Batteries R6 (2)
  woofer (1)

Other features
  Fastext
  NICAM (KV-29C2B,29C2E only)

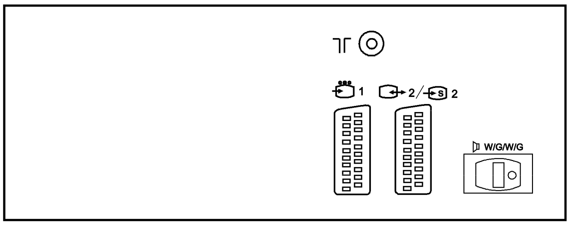
**[RM-862]**

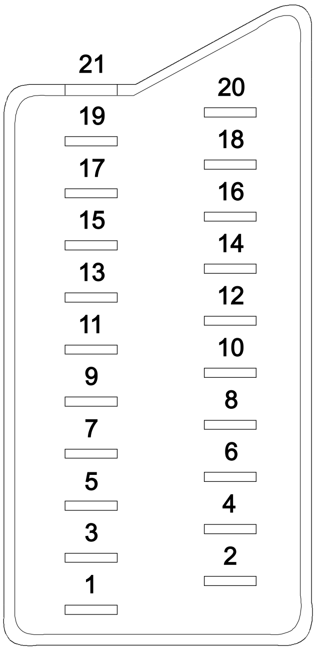
| | |
|---|---|
| Remote control system | Infrared control |
| Power requirements | 3V dc (2 batteries) R6 (size AA) |
| Dimensions | Approx. 210x56x24 mm (w/h/d) |
| Weight | Approx. 110g (Not including battery) |

**Design and specifications are subject to change without notice.**

| Model name / Item | KV-29C2A | KV-29C2B | KV-29C2D | KV-29C2E | KV-29C2K<br>KV-29C2R |
|---|---|---|---|---|---|
| PIP | OFF | OFF | OFF | OFF | OFF |
| MPIP | OFF | OFF | OFF | OFF | OFF |
| RGB Priority | ON | ON | OFF | OFF | OFF |
| Rotation Coil | OFF | OFF | OFF | OFF | OFF |
| VM (Velocity Modulation) | ON | ON | ON | ON | ON |
| Scart 1 | ON | ON | ON | ON | ON |
| Scart 2 | ON | ON | ON | ON | ON |
| Front in (3) | ON | ON | ON | ON | ON |
| Scart 4 | OFF | OFF | OFF | OFF | OFF |
| AKB in 16:9 mode | ON | ON | ON | ON | ON |
| TXT | ON | ON | ON | ON | ON |
| FLOF | ON | ON | ON | ON | ON |
| TOP | ON | ON | ON | ON | ON |
| Norm B/G/H | ON | ON | ON | ON | ON |
| Norm I | OFF | ON | OFF | OFF | OFF |
| Norm D/K | OFF | ON | ON | ON | ON |
| Norm L | OFF | ON | OFF | OFF | OFF |
| Language Preset | Italian | French | German | Spanish | OIRT |

## 21 pin connector ( 1, 2 / 2 )





| Pin No. | 1 | 2 | 4 | Signal | Signal Level |
|---|---|---|---|---|---|
| 1 | ○ | ○ | ○ | Audio output B (Right) | Standard level : 0.5V rms<br>Output impedance : Less than 1k ohms* |
| 2 | ○ | ○ | ○ | Audio input B (Right) | Standard level : 0.5V rms<br>Output impedance : More than 10k ohms* |
| 3 | ○ | ○ | ○ | Audio output A (Left) | Standard level : 0.5V rms<br>Output impedance : Less than 1k ohm* |
| 4 | ○ | ○ | ○ | Ground (Audio) | |
| 5 | ○ | ○ | ○ | Ground (Blue) | |
| 6 | ○ | ○ | ○ | Audio input A (Left) | Standard level : 0.5V rms<br>Output impedance : Less than 10k ohm* |
| 7 | ○ | ● | ● | Blue input | 0.7 ± 3dB, 75 ohms, positive |
| 8 | ○ | ○ | ○ | Function select (AV control) | High state (9.5 - 12V) : Part mode<br>Low state (0 - 2V) : TV mode<br>Input impedance : More10k ohms<br>Input capacitance : Less than 2nF |
| 9 | ○ | ○ | ○ | Ground (Green) | |
| 10 | ○ | ○ | ○ | Open | |
| 11 | ○ | ● | ● | Green | |
| 12 | ○ | ○ | ○ | Open | |
| 13 | ○ | ○ | ○ | Ground (Red) | |
| 14 | ○ | ○ | ○ | Ground (Blanking) | |
| 15 | ○ | — | — | Red input | 0.7 ± 3dB, 75 ohms, positive |
| | — | ○ | ○ | (S signal) croma input | 0.7 ± 3dB, 75 ohms, positive |
| 16 | ○ | ● | ● | Blanking input (Ys signal) | High state (1 - 3V) Low state (0 - 0.4V)<br>Input impedance : 75 ohms |
| 17 | ○ | ○ | ○ | Ground (Video output) | |
| 18 | ○ | ○ | ○ | Ground (Video input) | |
| 19 | ○ | ○ | ○ | Video output | 1V ± 3dB, 75ohms,<br>positive sync : 0.3V (-3 + 10dB) |
| 20 | ○ | — | — | Video input | 1V ± 3dB, 75ohms,<br>positive sync : 0.3V (-3 + 10dB) |
| | — | ○ | ○ | Video input Y (S signal) | 1V ± 3dB, 75ohms,<br>positive sync : 0.3V (-3 + 10dB) |
| 21 | ○ | ○ | ○ | Common ground (plug, sheild) | |

○ Connected ● Not Connected (Open) * at 20Hz - 20kHz

## TABLE OF CONTENTS

*Section* *Title* *Page*

## 1. GENERAL

Overview ........ 7
Getting Started ........ 8
TV Operation ........ 9
Advanced Operations ........ 10
Teletext ........ 16
Optional Equipment ........ 17
For Your Information ........ 19

## 2. DISASSEMBLY

2-1. Rear Cover Removal ........ 20
2-2. Chassis Assy Removal ........ 20
2-3. Service Position ........ 20
2-4. Wire Dressing ........ 20
2-5. A Board Removal ........ 21
2-6. A Extension Board ........ 21
2-7. Picture Tube Removal ........ 21
Removal and Replacement of The Main-Bracket Bottom Plates ........ 22

## 3. SET-UP ADJUSTMENTS

3-1. Beam Landing ........ 23
3-2. Convergence ........ 24
3-3. White Balance ........ 26

## 4. CIRCUIT ADJUSTMENTS

4-1. Electrical Adjustments ........ 27
4-2. Test Mode 2 : ........ 30
4-3. BE-3D Self Diagnostic Software ........ 31

*Section* *Title* *Page*

## 5. DIAGRAMS

5-1. Block Diagrams ........ 32
5-2. Circuit Boards Location ........ 38
5-3. Schematic Diagrams and Printed Wiring Boards ........ 38
* D Board ........ 43
* A Board ........ 48
* C Board ........ 58
* VM Board ........ 59
* D2 Board ........ 60
* K Board ........ 63
* J3 Board ........ 64
* IF Board [VIF (AEP)] ........ 65
* IF Board [VIF (FR)] ........ 65
IC Blocks ........ 67
5-4. Semiconductors ........ 69

## 6. EXPLODED VIEWS

6-1. Chassis ........ 71
6-2. Picture Tube ........ 72

7. ELECTRICAL PARTS LIST ........ 73

**CAUTION**

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.**

WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

**ATTENTION**

**APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.**

ATTENTION !!

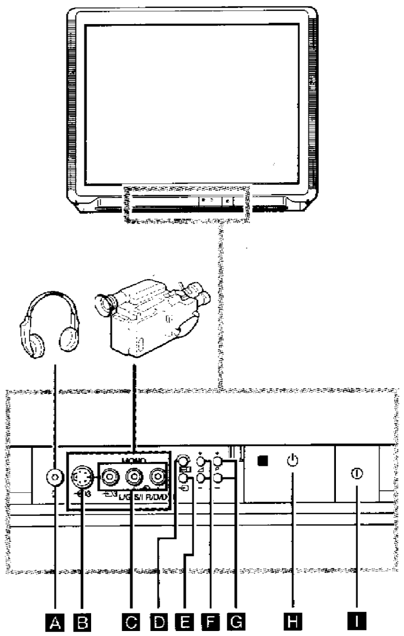
AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.

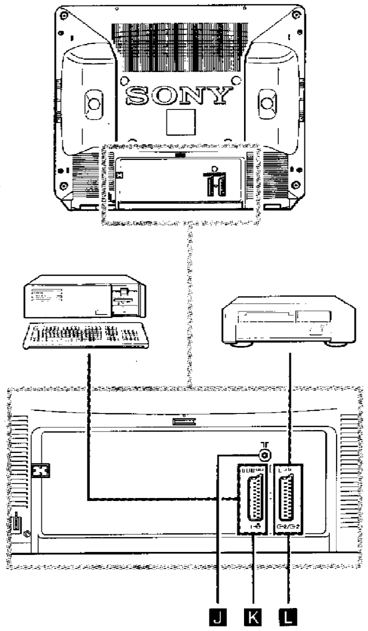
ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!

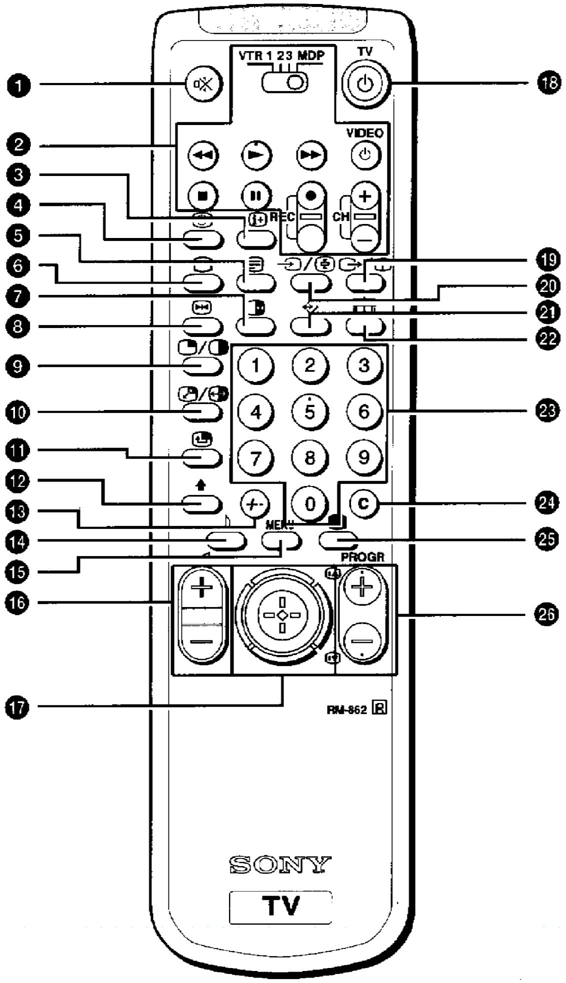
LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE PUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY.

# SECTION 1 GENERAL

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.


MONO
L/G/S/I R/D/D
A
B
C
D
E
F
G
H
I




1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
VTR 1 2 3 MDP
TV
VIDEO
REC
CH
1 2 3
4 5 6
7 8 9
-/-- 0 C
MENU
PROGR
RM-862
SONY
TV
18
19
20
21
22
23
24
25
26

# Overview

This section briefly describes the controls and the buttons on the TV set and on the Remote Commander. Please open the flaps at the front and at the back of the Instruction manual for illustrations of the Remote Commander and the TV set. Letters in boxes refer to the buttons on the TV set, numbers in circles to the buttons on the Remote Commander. For more information, refer to the page numbers given next to each description.

## TV buttons and Terminals

| Reference and Symbol | Name | Refer to Page |
|---|---|---|
| **Front of the set** | | |
| A ∩ | Headphones jack | 59 |
| B ⇽Ⓢ 3 | S video input jack | 59 |
| C ⇽▢ 3, ⇽Ⓐ 3 | Audio/video input jacks | 59 |
| D ▶▶▢ | Automatic Preset button | 41 |
| E ⇽▢ | Input mode button | 60 |
| F ◁ +/- | Volume control | 43 |
| G P +/- | Programme button | 42 |
| H ⏻ | Standby mode indicator | 42 |
| I ⓘ | Main power switch | 42 |
| **Rear of the set** | | |
| J ⫪ | Aerial socket | 40 |
| K ⇽Ⓐ 1 | 21 pin Euro connector | 59 |
| L ⇾ 2/⇽Ⓢ 2 | 21 pin Euro connector | 59 |
| M ◁ W/G/W/G | Woofer terminal | 40 |

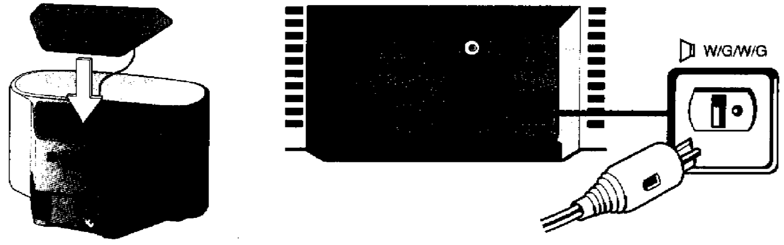
## Remote Commander Operation

| Reference and Symbol | Name | Refer to Page |
|---|---|---|
| ❶ ◁✕ | Muting on/off button | 42 |
| ❷ | **VCR operation** | 62 |
| **VTR 123 MDP** | Video equipment selector | 62 |
| ◀◀ ▶ ▶▶ ■ ❚❚ ● | Buttons to operate Video equipment | 62 |
| VIDEO ⏻, CH +/- | | |
| ❸ ⓘ | On-screen display button | 42 |
| ❹ ⊙ | Time display button | 42 |
| ❺ ⊜ | Teletext button | 57 |
| ❻ ▢ | TV power on/TV mode button | 42, 43 |
| ❼❽❾❿⓫⓬ | No function on this set | - |
| ⓭ -/-- | Double digit entering button | 42 |
| ⓮ ♪ | Sound mode button | 49 |
| ⓯ MENU | Menu on/off button | 44 |
| ⓰ ◁ +/- | Volume control button | 42 |
| ⓱ ⊕ | Joystick for menu selection<br>Press to confirm selection (OK function) | 44 |
| ⓲ TV⏻ | TV standby button | 42 |
| ⓳ ⇾<br>? | No function on this set<br>Teletext: reveal button | -<br>57 |
| ⓴ ⇽▢<br>⊛ | Input mode button<br>Teletext: Freezing the subpage | 60<br>57 |
| ㉑ ⇽◇ | Teletext: Favourite pages button | 58 |
| ㉒ ⊞ | Screen format button | 42 |
| ㉓ 1, 2, .... 9, 0 | Number buttons | 42 |
| ㉔ C | Direct channel button | 43 |
| ㉕ ■ | Picture mode button | 49 |
| ㉖ PROGR +/-<br>▲▼ | Programme buttons<br>Teletext: Page up/page down buttons | 42<br>57 |

## Step 1

## Connecting the Woofer

Place the woofer on top of the TV set. Connect the lead of the woofer to the terminal ◁ W/G/W/G **M** at the rear of the set.



## Step 2

## Connecting the Aerial

### (If you connect a VCR, skip to step 3)

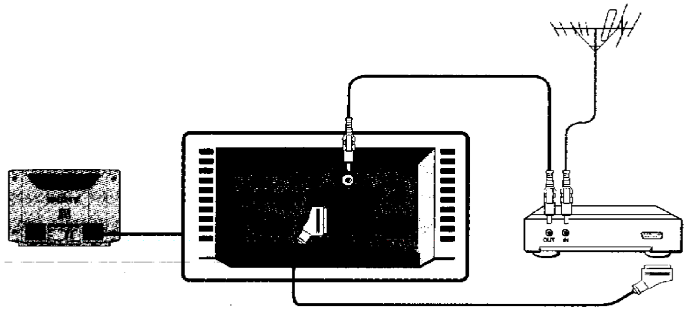
Insert the aerial plug tightly into the aerial socket ⏉⏉ **J** . Use a good-quality aerial cable (not supplied), corresponding to the relevant regulations.

## Step 3

## Connecting a VCR

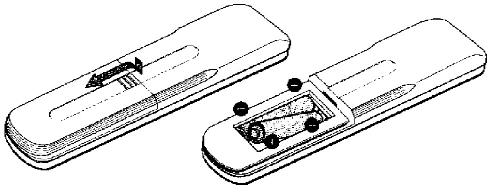
We recommend that you tune in the VCR signal to programme number »0«. For details, see »Presetting Channels Manually« on page 46.

See "Connecting Optional Equipment" on page 59 for more information.



## Step 4

## Inserting the Batteries Into the Remote Commander



Respect your environment! Dispose of used batteries in an environmentally friendly way.

## Step 5

## Presetting Channels Automatically

With this function, the TV can automatically search and store up to 100 different channel numbers.

If you prefer manual presetting, refer to »Presetting Channels Manually« on page 46.

**1** Plug into mains.
Press the power switch ① **I** on the TV set.

**2** Press and hold the button ⏩☐ **D** on the TV set until the automatic menu is displayed and the search starts.

After all available channels are stored, the normal TV picture is shown.

# TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the remote commander (numbers in circles). All basic functions are also available on the TV set (letters in boxes). Open the flaps at the front and at the back of the Instruction Manual to see the illustrations of the Remote Commander and the TV set.

| To | Press |
|---|---|
| Switch on | Ⓘ ▮ on TV |
| Switch off temporarily | ⏻ ⓲<br>TV is now in standby mode and indicator ⏻ 🅷 on TV lights up. |
| Switch on from standby mode | ▢ ❻, PROGR +/- ㉖ 🅶<br>or any number button ㉓ |
| Switch off completely | Ⓘ ▮ on TV<br>To save energy, switch off your TV completely when TV is not in use. |
| Select programmes | PROGR +/- ㉖ 🅶 or number buttons ㉓.<br>For double digit number, press -/- - ⓭ then the number, e.g. for 23, press -/- - ⓭ then 2 and 3. |
| Display on screen indications | ⓘ ❸. Press again to make the indications disappear. |
| Adjust the volume | ◿ + or - ⓰ 🅵 |
| Mute the sound | 🔇 ❶. Press again to restore the sound. |
| Display the time (only available when teletext | ◎ ❹. Press again to make the display disappear. |

## TV Operation (continued)

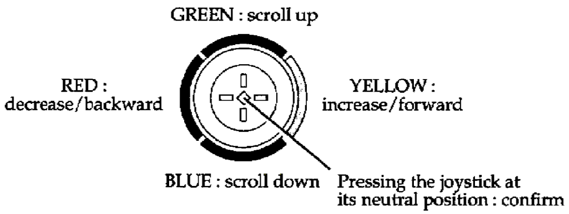
| To | Press |
|---|---|
| View programmes in 16:9 mode | ⊞ ㉒. Press again to return to 4:3 mode. |
| Tune in a channel temporarily | **C** ㉔ once for terrestial channels (or twice for cable channels). The indication »C« (»S« for cable channels) appears.<br>Enter the double digit number,<br>e.g. for 4, press 0 then 4. |
| View video input picture (see page 60 for detailed information) | ⇥ ⓴ 🅴 repeatedly until the desired video input appears. Press ▢ ❻ to restore the TV picture. |
| View teletext (see page 57 for detailed information) | |
| Switch on | ☰ ❺ |
| Select a page | three number buttons ㉓ or ▲ ㉖ (for next page) or ▼ ㉖ (for previous page). |
| Use fastext | Push joystick ⓱ to select a colour. |
| Switch off | ▢ ❻ |

# Adjusting and Setting the TV Using the Menu

You can adjust and set various functions on the TV using the following remote commander buttons.

1 Press MENU ⑮ to switch menu on/off.

2 Use the joystick ⑰ as follows:

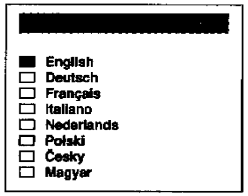

GREEN : scroll up
RED : decrease/backward
YELLOW : increase/forward
BLUE : scroll down
Pressing the joystick at its neutral position : confirm

# Choosing the Menu Language

This function enables you to change the language of the menu screens.

**1** Press power switch ⏻ I on the TV. If the standby indicator ⏻ H on the TV is lit, press ▢ ⑥ or a number button ㉓ on the Remote Commander.

**2** Press the MENU button ⑮ on the remote commander.



- ■ English
- ☐ Deutsch
- ☐ Français
- ☐ Italiano
- ☐ Nederlands
- ☐ Polski
- ☐ Česky
- ☐ Magyar

**3** Push joystick ⑰ to blue or green to select the language you want then push to yellow.

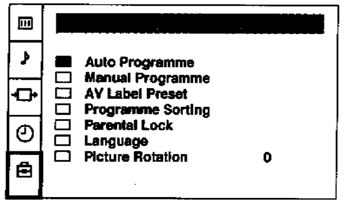
**4** Press the MENU button ⑮ to restore the normal TV picture.

# Presetting Channels Automatically

You may have already preset the channels automatically by using the method shown on page 41. You can also preset channels automatically by using the remote commander as follows:

**1** Press the MENU button ⑮.

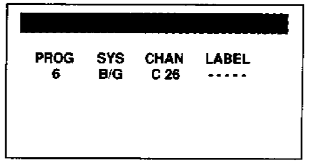
**2** Push joystick ⑰ to blue or green to select the symbol 🖶 on the menu screen then push to yellow.



- ■ Auto Programme
- ☐ Manual Programme
- ☐ AV Label Preset
- ☐ Programme Sorting
- ☐ Parental Lock
- ☐ Language
- ☐ Picture Rotation 0

**3** Push to blue or green to select »Auto Programme«.

**4** Push to yellow and hold until the automatic menu is displayed and the search starts. After all available channels have been preset, the normal TV picture is shown.



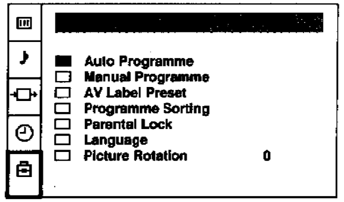
| PROG | SYS | CHAN | LABEL |
|---|---|---|---|
| 6 | B/G | C 26 | ----- |

# Presetting Channels Manually

This function enables you to preset channels one by one to different programme numbers. This is also convenient for allocating programme numbers to various video input sources.

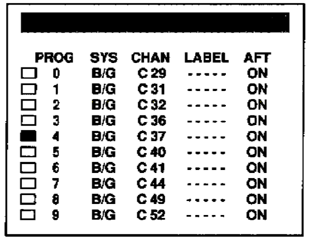
**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.



■ Auto Programme
☐ Manual Programme
☐ AV Label Preset
☐ Programme Sorting
☐ Parental Lock
☐ Language
☐ Picture Rotation 0

**3** Push to blue or green to select »Manual Programme« then push to yellow .



| | PROG | SYS | CHAN | LABEL | AFT |
|---|---|---|---|---|---|
| ☐ | 0 | B/G | C 29 | ----- | ON |
| ☐ | 1 | B/G | C 31 | ----- | ON |
| ☐ | 2 | B/G | C 32 | ----- | ON |
| ☐ | 3 | B/G | C 36 | ----- | ON |
| ■ | 4 | B/G | C 37 | ----- | ON |
| ☐ | 5 | B/G | C 40 | ----- | ON |
| ☐ | 6 | B/G | C 41 | ----- | ON |
| ☐ | 7 | B/G | C 44 | ----- | ON |
| ☐ | 8 | B/G | C 49 | ----- | ON |
| ☐ | 9 | B/G | C 52 | ----- | ON |

**4** Push to blue or green to select to which programme number you want to preset a channel then push to yellow.

**5** Push to blue or green to select the TV broadcast system (B/G for western European countries or D/K for eastern European countries) or a video input source (AV1,AV2 ...) then push to yellow.

**6** Push to blue or green to select »C« (for terrestrial channels) or »S« (for cable channels) then push to yellow.

**7** Select the first number digit of »CHAN« (channel) then the second number digit of »CHAN« with the number buttons ㉓ on the remote commander
**or**
Push joystick ⑰ to blue or green to search for the next available channel.

**8** If you want to store the channel, go to step 9. If not, select a new channel using the number buttons ㉓ or push to blue or green to resume the search.

**9** Press the joystick ⑰.

**10** Repeat steps 4 to 9 to preset other channels.

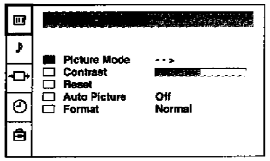
**11** Press the MENU button ⑮ to restore the normal TV picture.

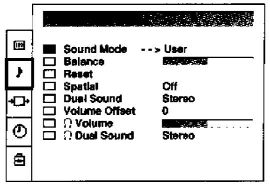
# Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste.

**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select ▥ for picture control or ♪ for sound control then push to yellow.





**3** Push to blue or green to select the desired item then push to yellow.

**4** Push to red or yellow to alter the item then press the joystick ⑰.
For the effect of each control, see the following tables.

**5** Repeat steps 3 and 4 to adjust the other items.

**6** Press the MENU button ⑮ to restore the normal TV picture.

| PICTURE CONTROL | Effect |
|---|---|
| Picture Mode | • User —> Game —> Movie —> Sports —> Live<br>In »User« mode, you can preset Brightness, Colour, Sharpness and Hue (NTSC signals only) as follows:<br>1 Push joystick ⑰ to blue or green to select the desired item then push to yellow.<br>2 Push to red or yellow to adjust then press the joystick ⑰.<br>3 Push to red to return to the PICTURE CONTROL menu. |
| Contrast | • Darker —— I —— Brighter |
| Reset | • Resets picture to the factory preset levels. |
| Auto Picture | • All the picture levels automatically change according to the surrounding lighting level (Auto Picture Control). |
| Format | • Wide screen effect (16:9) |

## Adjusting the Picture and Sound (continued)

| SOUND CONTROL | Effect |
|---|---|
| Sound Mode | • User —> Rock —> Jazz —> Pop<br>In »User« mode, you can preset Treble and Bass as follows:<br>1 Push joystick ⑰ to blue or green to select the item then push to yellow.<br>2 Push to red or yellow to adjust then press the joystick ⑰.<br>3 Push to red to return to the »SOUND CONTROL« menu. |
| Balance | • Left —— I —— Right |
| Reset | • Resets sound to the factory preset levels. |
| Spatial | • Acoustic sound effect |
| Dual Sound | • A: Left channel —> B: Right channel —> Stereo —> Mono |
| Volume Offset | • Presets the volume level for individual programmes<br>-12 —— 0 —— +12 |
| ∩ Volume | • Adjusts the headphone volume |
| ∩ Dual Sound | • Selects the headphone channels<br>A: Left channel —> B: Right channel —> Stereo —> Mono |

### Changing Modes Quickly

You can quickly change the Sound Mode or the Picture Mode without entering the »SOUND CONTROL« or the »PICTURE CONTROL« menu.

1 Press ■ ㉕ for the picture or ♪ ⑭ for the sound.

2 Push joystick ⑰ to blue or green to select the desired mode.

3 Press ■ ㉕ or ♪ ⑭ again to restore the normal TV screen.

# Manual Fine-Tuning

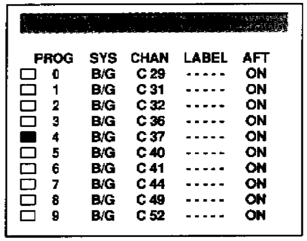
Normally, the automatic fine-tuning (AFT) function is operating.

If the picture is distorted however, you can manually fine-tune a channel to obtain a better picture reception.

**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

**3** Push to blue or green to select »Manual Programme« then push to yellow.



| | PROG | SYS | CHAN | LABEL | AFT |
|---|---|---|---|---|---|
| ☐ | 0 | B/G | C 29 | ----- | ON |
| ☐ | 1 | B/G | C 31 | ----- | ON |
| ☐ | 2 | B/G | C 32 | ----- | ON |
| ☐ | 3 | B/G | C 36 | ----- | ON |
| ■ | 4 | B/G | C 37 | ----- | ON |
| ☐ | 5 | B/G | C 40 | ----- | ON |
| ☐ | 6 | B/G | C 41 | ----- | ON |
| ☐ | 7 | B/G | C 44 | ----- | ON |
| ☐ | 8 | B/G | C 49 | ----- | ON |
| ☐ | 9 | B/G | C 52 | ----- | ON |

**4** Push to blue or green to select the programme number which corresponds to the channel you want to manually fine-tune.

**5** Push to yellow repeatedly until the AFT position changes colour.

**6** Push to blue or green to fine-tune the channel frequency (-15 to +15).

**7** Press the joystick ⑰.

**8** Repeat steps 4 to 7 to fine-tune other channels.

**9** Press the MENU button ⑮ to restore the normal TV picture.

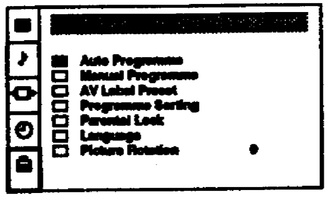
# Sorting Programme Positions

This function enables you to exchange the programme positions.

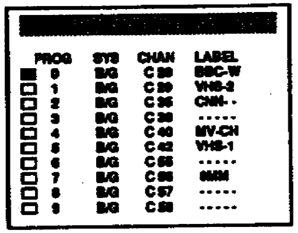
**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

**3** Push to blue or green to select »Programme Sorting« then push to yellow .



**4** Push to blue or green to select the programme position you want to exchange then push to yellow.



| | PROG | SYS | CHAN | LABEL |
|---|---|---|---|---|
| ■ | 0 | B/G | C [illegible] | BBC-W |
| ☐ | 1 | B/G | C [illegible] | VHS-2 |
| ☐ | 2 | B/G | C [illegible] | CNN- - |
| ☐ | 3 | B/G | C [illegible] | ----- |
| ☐ | 4 | B/G | C 40 | MV-CH |
| ☐ | 5 | B/G | C 42 | VHS-1 |
| ☐ | 6 | B/G | C [illegible] | ----- |
| ☐ | 7 | B/G | C [illegible] | [illegible] |
| ☐ | 8 | B/G | C 57 | ----- |
| ☐ | 9 | B/G | C [illegible] | ----- |

**5** Push to blue or green to select the programme position of the channel you want exchanged then push to yellow.

**6** Repeat steps 4 to 5 if you wish to exchange other programme positions.

**7** Press the MENU button ⑮ to restore the normal TV picture.

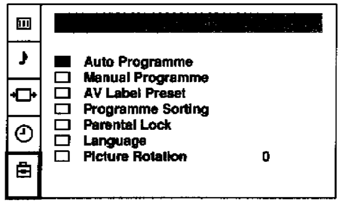
## Using Parental Lock

This function enables you to prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

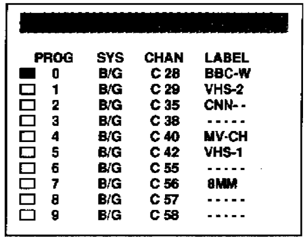
**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

**3** Push to blue or green to select »Parental Lock« then push to yellow.



**4** Push to blue or green to select the channel you want to block then push to yellow.
The symbol 🔒 appears before the programme number to indicate that this channel is now blocked.



| | PROG | SYS | CHAN | LABEL |
|---|---|---|---|---|
| ■ | 0 | B/G | C 28 | BBC-W |
| ☐ | 1 | B/G | C 29 | VHS-2 |
| ☐ | 2 | B/G | C 35 | CNN- - |
| ☐ | 3 | B/G | C 38 | - - - - - |
| ☐ | 4 | B/G | C 40 | MV-CH |
| ☐ | 5 | B/G | C 42 | VHS-1 |
| ☐ | 6 | B/G | C 55 | - - - - - |
| ☐ | 7 | B/G | C 56 | 8MM |
| ☐ | 8 | B/G | C 57 | - - - - - |
| ☐ | 9 | B/G | C 58 | - - - - - |

**5** Repeat step 4 if you wish to block other channels.

**6** Press the MENU button ⑮ to restore the normal TV picture.

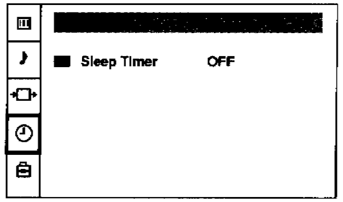
**Note:** To unblock, push to yellow after selecting the channel to unblock in the »Parental Lock« menu.

## Using the Sleep Timer

This function enables you to select a time period after which the TV automatically switches into standby mode.

**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ◷ on the menu screen then push to yellow.



**3** Push to yellow.

**4** Push to red or yellow to set time delay and press the joystick ⑰.

OFF 0:30 1:00 1:30 ........ 3:30 4:00

One minute before the TV switches into standby mode, a message is displayed on the screen.

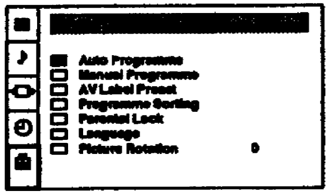
**5** Press the MENU button ⑮ to restore the normal TV picture.

## Adjusting the Picture Rotation

If, due to the earth magnetism, the picture slants, you can use the function »Picture Rotation« to readjust the picture.

**1** Press the MENU button ⑮.

**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.


Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Picture Rotation

**3** Push to blue or green to select »Picture Rotation« then push to yellow.

**4** Push to red or yellow to adjust the picture rotation then press the joystick ⑰. The adjusting range is -5 to +5.

**5** Press the MENU button ⑮ to restore the normal TV picture.

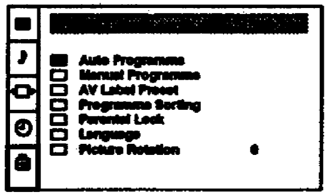
## Skipping Programme Positions

This function enables you to skip unused programme positions when selecting them with the PROGR+/- buttons. However, you can still watch the channel of the skipped programme position by using the number buttons.

**1** Press the MENU button ⑮.

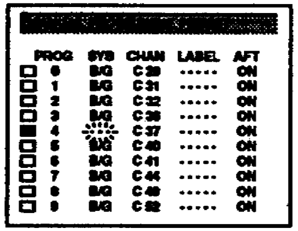
**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

**3** Push to blue or green to select »Manual Programme« then push to yellow.


Auto Programme
Manual Programme
AV Label Preset
Programme Sorting
Parental Lock
Language
Picture Rotation

**4** Push to blue or green to select the programme position you want to skip then push to yellow.

**5** Push to blue or green until »- - -« appears in the »SYS« position.



| | PROG | SYS | CHAN | LABEL | AFT |
|---|---|---|---|---|---|
| ☐ | 0 | B/G | C 29 | ------ | ON |
| ☐ | 1 | B/G | C 31 | ------ | ON |
| ☐ | 2 | B/G | C 32 | ------ | ON |
| ☐ | 3 | B/G | C 36 | ------ | ON |
| ■ | 4 | - - - | C 37 | ------ | ON |
| ☐ | 5 | B/G | C 40 | ------ | ON |
| ☐ | 6 | B/G | C 41 | ------ | ON |
| ☐ | 7 | B/G | C 44 | ------ | ON |
| ☐ | 8 | B/G | C 48 | ------ | ON |
| ☐ | 9 | B/G | C 52 | ------ | ON |

**6** Press the joystick ⑰.

**7** Repeat steps 4 to 6 to skip other programme positions.

**8** Press the MENU button ⑮ to restore the normal TV picture.

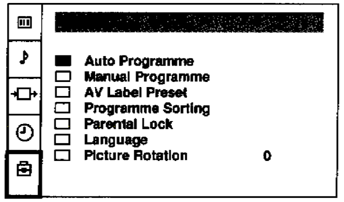
## Captioning a Station Name

Names for channels are usually automatically taken from teletext if available.
You can however name a channel or an input video source using up to five characters (letters or numbers).

**1** Press the MENU button ⑮.

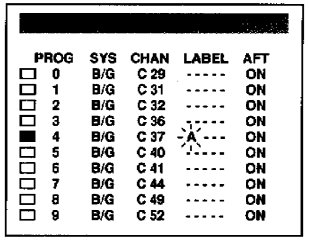
**2** Push joystick ⑰ to blue or green to select the symbol ⊟ on the menu screen then push to yellow.

**3** Push to blue or green to select »Manual Programme« then push to yellow.



**4** Push to blue or green to select the channel you wish to caption then push to yellow repeatedly until the first element of the »LABEL« position is highlighted.

**5** Push to blue or green to select a letter or number (select »-« for a blank) and push to yellow.
Select the other four characters in the same way.



| | PROG | SYS | CHAN | LABEL | AFT |
|---|---|---|---|---|---|
| ☐ | 0 | B/G | C 29 | ----- | ON |
| ☐ | 1 | B/G | C 31 | ----- | ON |
| ☐ | 2 | B/G | C 32 | ----- | ON |
| ☐ | 3 | B/G | C 36 | ----- | ON |
| ■ | 4 | B/G | C 37 | -A--- | ON |
| ☐ | 5 | B/G | C 40 | ----- | ON |
| ☐ | 6 | B/G | C 41 | ----- | ON |
| ☐ | 7 | B/G | C 44 | ----- | ON |
| ☐ | 8 | B/G | C 49 | ----- | ON |
| ☐ | 9 | B/G | C 52 | ----- | ON |

**6** After selecting all the characters, press the joystick ⑰.

**7** Repeat steps 4 to 6 to caption names for other channels.

**8** Press the MENU button ⑮ to restore the normal TV screen.

## Teletext

Most TV channels broadcast information via teletext. The index page of the broadcaster (usually page 100) gives you information on how to use the service.
Make sure you use a TV channel with a strong signal, otherwise teletext errors may occur.

## Switching Teletext on and off

**1** Select the channel which carries the teletext service you wish to view.

**2** Press ⊜ ⑤ to display teletext.
If no teletext signal is broadcast, the indication P100 is displayed on a black screen.

**3** Input three digits for the page number using the number buttons ㉓.
The page counter searches for the page and after some seconds the page is displayed.

**4** Press ▢ ⑥ to return to the normal TV picture.

## Using Other Teletext Functions

| To | Press |
|---|---|
| Access the next or preceding teletext page | ▲ ㉖ for the next page or<br>▼ ㉖ for the preceding page |
| Mix the mode | ⊜ ⑤ when in teletext mode. Now the teletext page is superimposed on the TV programme. Press again to return to the normal teletext display. |
| Freeze a teletext subpage | ⊕ ⑳. Press once again to cancel. |
| Reveal hidden information (e.g.: answers to a quiz) | ? ⑲. Press once again to cancel. |

## Favourite page system

You can store up to four of your favourite teletext pages per Teletext service. In this way you have quick access to the pages you frequently use.

### Storing pages

1 Use the number buttons ㉓ to select the page you would like to store.

2 Press ⇔ ㉑ twice.
The colour prompts at the bottom of the screen flash.

3 Push the joystick ⑰ to the desired colour to store the selected page.
The page is now stored on this colour.

Repeat steps 1 to 3 for the other 3 pages.

### Displaying the Favourite Pages

1 Press ⇔ ㉑.

2 Push the joystick ⑰ to the colour on which the desired page is stored.

Make sure you press ⇔ ㉑ , otherwise the normal Fastext facility operates!

## Using Fastext

(only available, if the TV station broadcasts Fastext signals)

With Fastext you can access pages with one key stroke . When Fastext is broadcast, a colour-coded menu appears at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue marks on the Remote Commander.

Push the joystick ⑰ to the colour mark which corresponds to the colour-coded menu. The page is displayed after some seconds.

## Connecting Optional Equipment

There is a wide range of optional equipment you can connect to your TV.
Refer to the illustrations on the back flap page of this manual.

| Symbol | Acceptable input signals | Available output signals |
|---|---|---|
| ⇥1 K | Normal audio/video and RGB | Audio/video from TV tuner |
| ⇨ 2/⇥ 2 L | Normal audio/video and S video | Audio/video from selected source |
| ⇥ 3, ⇥ 3 B<br>⇥ 3 C | Normal audio/video and S video | No output |

### About S video input

Video signals may be separated into Y (luminance) and C (chrominance) signals. Separating the two signals prevents interference and thus improves the picture quality.

### Notes on connections:

- If the picture or sound is distorted, move the VCR away from the TV.
- When connecting a monaural VCR, connect only the white jack to both the TV and VCR.
- Select »TV« for output in the »VIDEO CONNECTION« menu if you connect a decoder to ⇨ 2/⇥ 2 L (see page 60).

## Connecting Headphones

Plug in the headphones to the 🎧 socket A on the front of the TV.

# Selecting Input and Output Signals

This section explains how to select the output signal from ⇦ 2/⇥Ⓢ 2 🅻 and how to select and view the input. You can use direct access buttons ⇥ ⑳ 🅴 to select the input or the menu system to select input and output.

## Selecting Input Signals With Direct Access Buttons

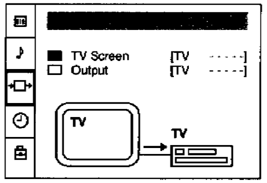
Press ⇥ ⑳ 🅴 repeatedly .
Press ▢ ⑥ to restore the normal TV picture.

| Symbol on the screen | Input Signal |
|---|---|
| ⇥1 | Audio/video through Euro AV connector 🅺 |
| ⇥Ⓡ | RGB through Euro AV connector 🅺 . |
| ⇥2 | Audio/video through Euro AV connector 🅻 |
| ⇥Ⓢ 2 | S video through Euro AV connector 🅻 |
| ⇥3 | Audio/video through the phono jacks 🅲 |
| ⇥Ⓢ 3 | S video through the 4 pin DIN 🅱 |

## Selecting With the Video Connection Menu

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select ⇥▢⇨ for »Video Connection« then push to yellow.



3 Push to blue or green to select »TV Screen« (input source for the TV Screen) or »Output« (output source for ⇦ 2/⇥Ⓢ 2 🅻 ) then push to yellow.

4 Push to red or yellow repeatedly to select the desired input or output source then press the joystick ⑰.

5 Press the MENU button ⑮ to restore the normal TV picture.

**Note:** If you select »AUTO« for output, the output source automatically becomes the same as the desired input source.

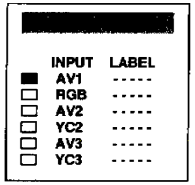
# Using AV Label Preset

This function enables you to label the input sources using up to five characters (letters or numbers).

1 Press the MENU button ⑮.

2 Push joystick ⑰ to blue or green to select the symbol ⊟ on the screen then push to yellow.

3 Push to blue or green to select »AV Label Preset« then push to yellow.



4 Push to blue or green to select the desired input source then push to yellow.

5 Push to blue or green to select a letter or number then push to yellow (select »-« for a blank).
Select the other four characters in the same way.

6 After selecting all the characters, press the joystick ⑰.

7 Repeat steps 4 to 6 to label other input sources.

8 Press the MENU button ⑮ to restore the normal TV screen.

# Troubleshooting

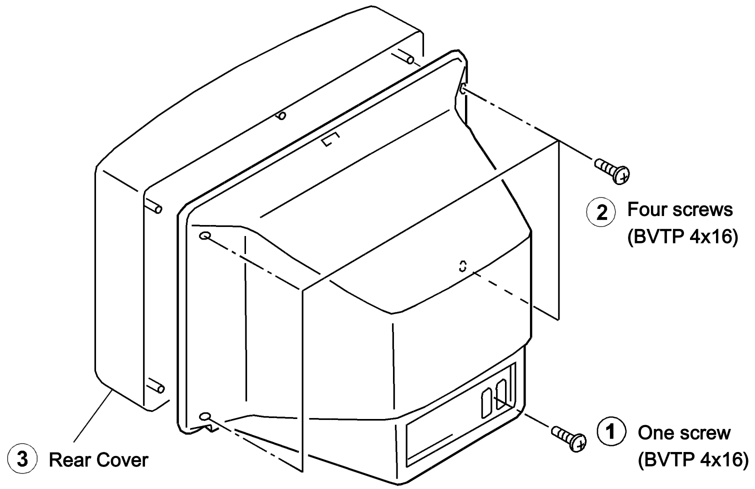
Here are some simple solutions to the problems which may affect the picture and sound.

| **Problem** | **Solution** |
|---|---|
| No picture (screen is dark), no sound | • Plug the TV in.<br>• Press ⏻ I on the TV. (If ⏻ indicator H is on, press ▭ ❻ or a programme number ㉓ on the Remote Commander.)<br>• Check the aerial connection.<br>• Check if the selected video source is on.<br>• Turn the TV off for 3 or 4 seconds then turn it on again using ⏻ I. |
| Poor or no picture (screen is dark), but good sound | • Press MENU ⓯ to enter the »PICTURE CONTROL« menu and adjust »Contrast«, »Brightness« and »Colour«. |
| Poor picture quality when watching an RGB video source. | • Press ⇥ ⓴ E repeatedly to select ⇥. |
| Good picture but no sound | • Press ⊿ + ⓰ F.<br>• If 🔇 is displayed on the screen, press 🔇 ❶. |
| No colour for colour programmes | • Press MENU ⓯ to enter the »PICTURE CONTROL« menu, select »Reset« then press the joystick ⓱. |
| Remote Commander does not function. | • Replace the batteries |

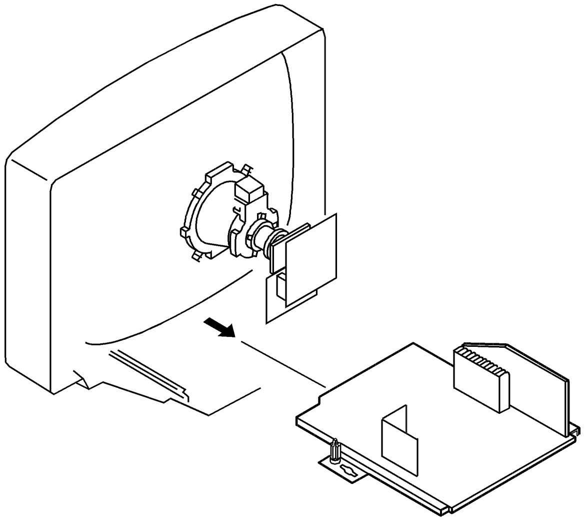
If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

# SECTION 2
# DISASSEMBLY

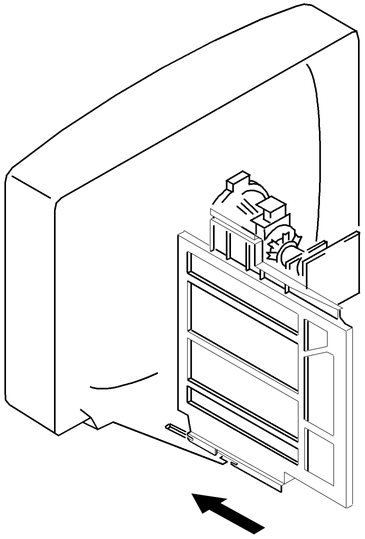
## 2-1. REAR COVER REMOVAL


② Four screws
(BVTP 4x16)
① One screw
(BVTP 4x16)
③ Rear Cover

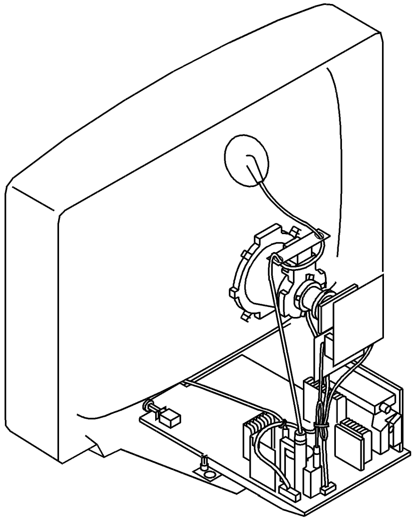
## 2-2. CHASSIS ASSY REMOVAL



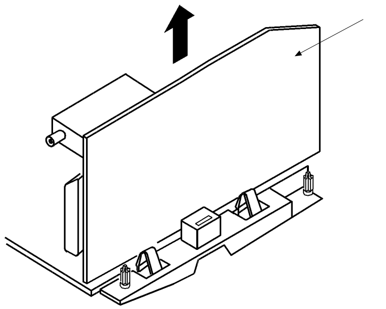
## 2-3. SERVICE POSITION



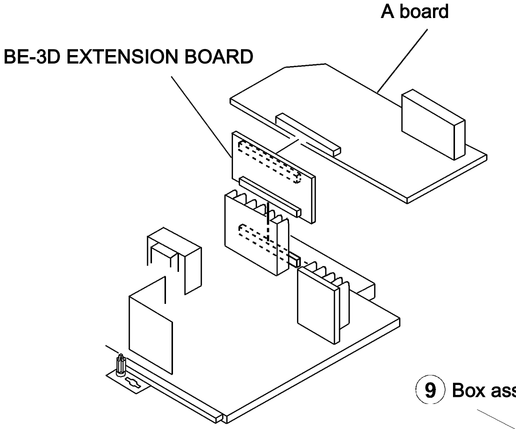
## 2-4. WIRE DRESSING



## 2-5. A BOARD REMOVAL



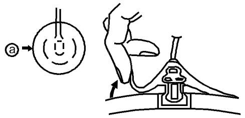
## 2-6. A EXTENSION BOARD


A board
BE-3D EXTENSION BOARD

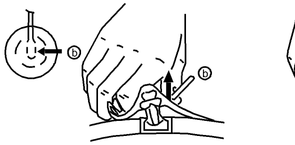
## • REMOVAL OF ANODE-CAP

**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

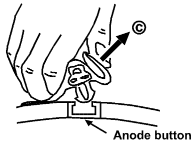
* REMOVING PROCEDURES.



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ


ⓒ
Anode button

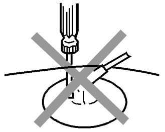
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow ⓒ

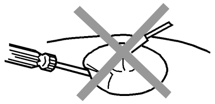
### • HOW TO HANDLE AN ANODE-CAP

① Don't damage the surface of anode-cap with sharp shaped material !

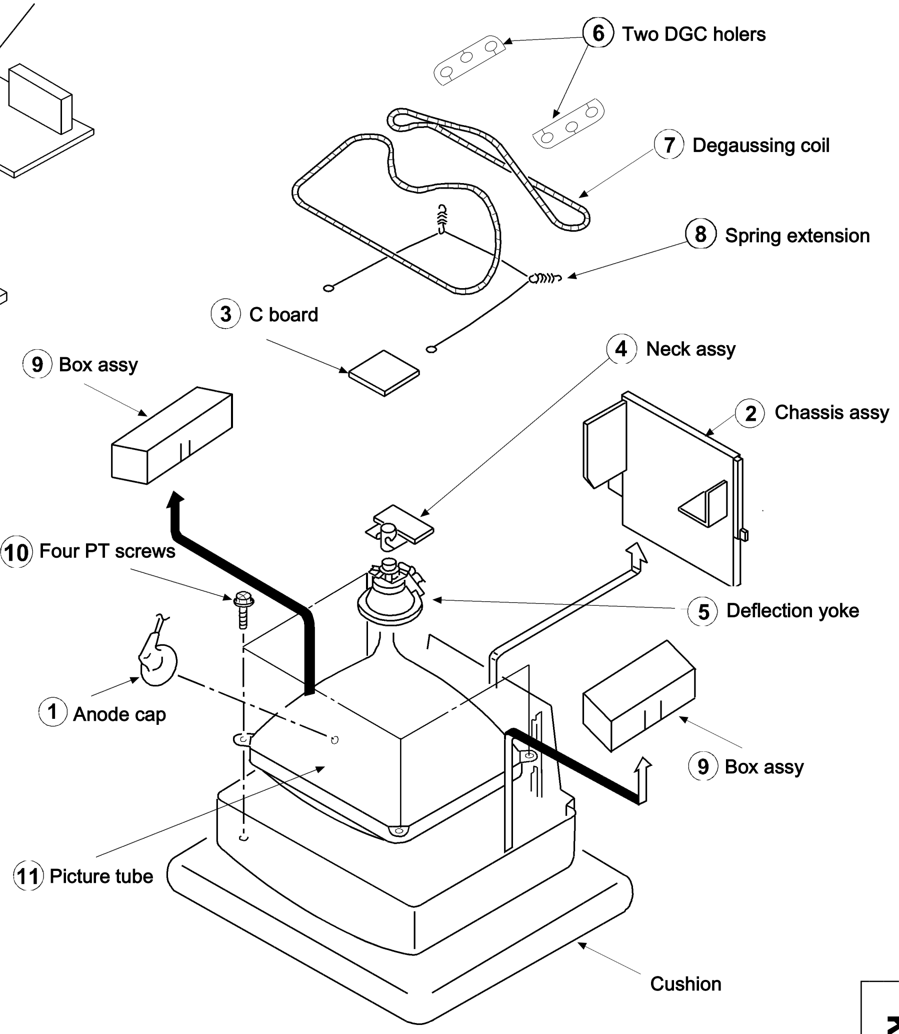
② Don't press the rubber hardly not to hurt inside of anode-caps !
A metal fitting called as shatter-hook terminal is built into the rubber.

③ Don’t turn the foot of rubber over hardly !
The shatter-hook terminal will stick out or damage the rubber.





## 2-7. PICTURE TUBE REMOVAL


⑥ Two DGC holers
⑦ Degaussing coil
⑧ Spring extension
③ C board
⑨ Box assy
④ Neck assy
② Chassis assy
⑩ Four PT screws
⑤ Deflection yoke
① Anode cap
⑨ Box assy
⑪ Picture tube
Cushion

## REMOVAL AND REPLACEMENT OF THE MAIN-BRACKET BOTTOM PLATES.

### (1) REMOVING THE PLATES

In the event of servicing being required to the solder side of the D Board printed circuit, the bottom plates fitted to the main chassis bracket require to be removed. This is performed by cutting the gates with a sharp wire cutter at the locations shown and indicated by arrows.

**Note :** There are 5 plates fitted to the main bracket and secured by 4 or 6 gates. Only remove the necessary plate to gain access to the circuit board.

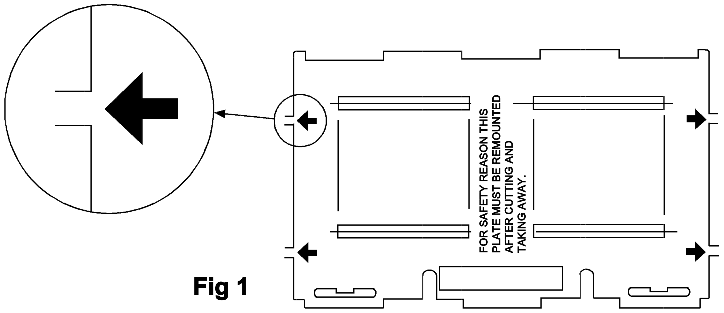

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.

Fig 1

**For safety reasons, on no account should the plates be removed and not refitted after servicing.**

### (2) REFITTING THE PLATES

Because the plates differ in size it is important that the correct plates are refitted in their original location.
The plates are identified by markings A-B-C-D-E on their top side.

1. Identify the plate by locating its marking.
2. Turn the plate over noting where the marking is located.
3. Locate the corresponding marking indicated on the main chassis bracket. See Fig 2.
4. Refit the plate as indicated in Fig 3 with the markings located next to each other.

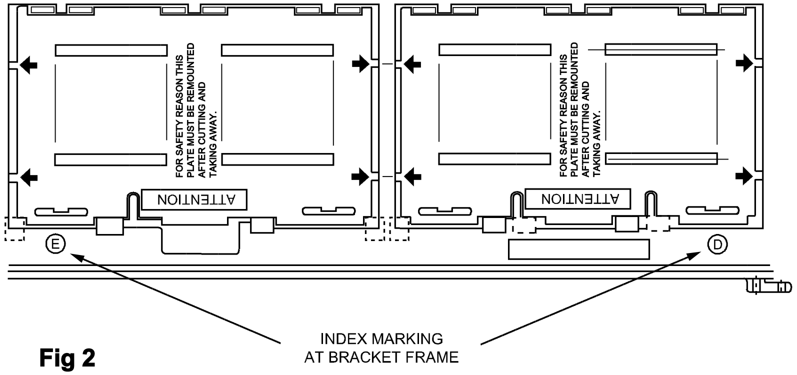

FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
FOR SAFETY REASON THIS PLATE MUST BE REMOUNTED AFTER CUTTING AND TAKING AWAY.
ATTENTION
E
D
INDEX MARKING
AT BRACKET FRAME

Fig 2

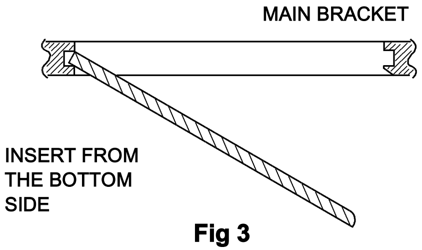

MAIN BRACKET
INSERT FROM
THE BOTTOM
SIDE

Fig 3

In the event of the plates requiring to be removed at a later stage, this can be achieved by inserting a screwdriver in the snap-recess indicated as in Fig 4 and lifting out.

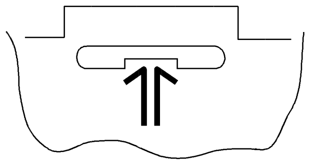


Fig 4

# SECTION 3
# SET - UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there are specific instructions to the contrary, carry out these adjustments with the rated power supply.
- Unless there are specific instructions to the contrary, set the controls and switches to these settings :

◑ Contrast ............ 80% (or remote control normal)
☼ Brightness ........... 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

**Note:** Testing equipment required.
1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

---

**Preparation:**
- In order to reduce the influence of geomagnetism on the set's picture tube, face it east or west.
- Switch on the set's power and degauss with the degausser.

## 3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   CONTRAST } normal
   BRIGHTNESS }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke forward and adjust with the purity control so that the red is at the centre and the blue and the green take up equally sized areas on each side. (See Fig. 3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that the entire screen becomes red. (See Fig. 3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig. 3-4)

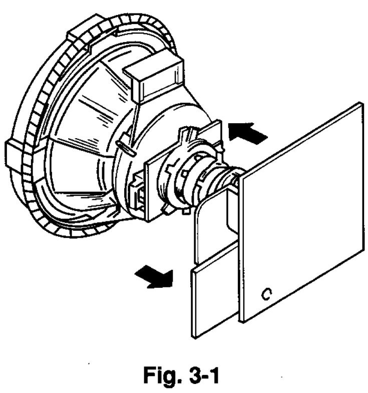


Fig. 3-1

Fig. 3-2

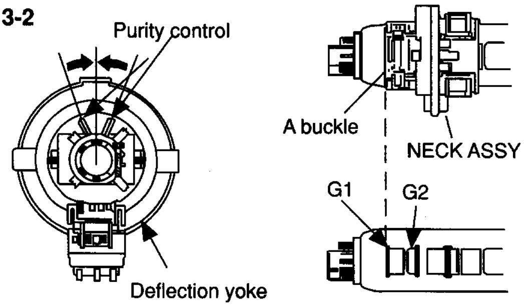
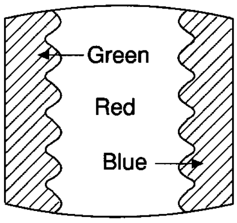

Purity control
A buckle
NECK ASSY
G1
G2
Deflection yoke

Fig. 3-3


Green
Red
Blue

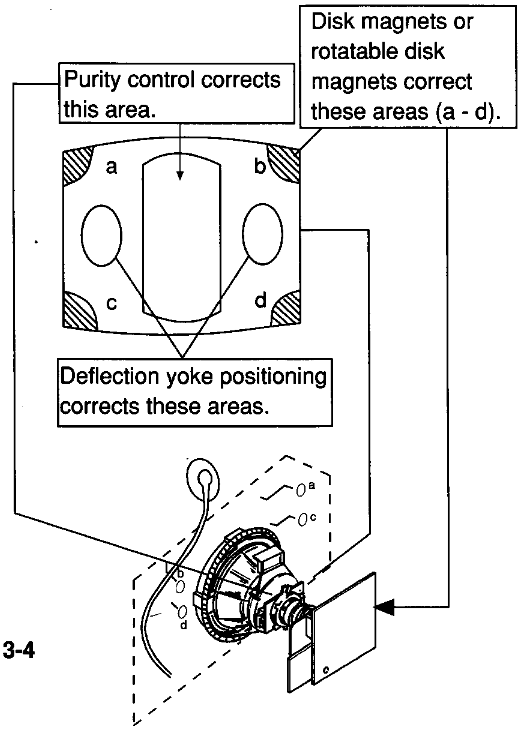

Purity control corrects this area.
Disk magnets or rotatable disk magnets correct these areas (a - d).
a
b
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d

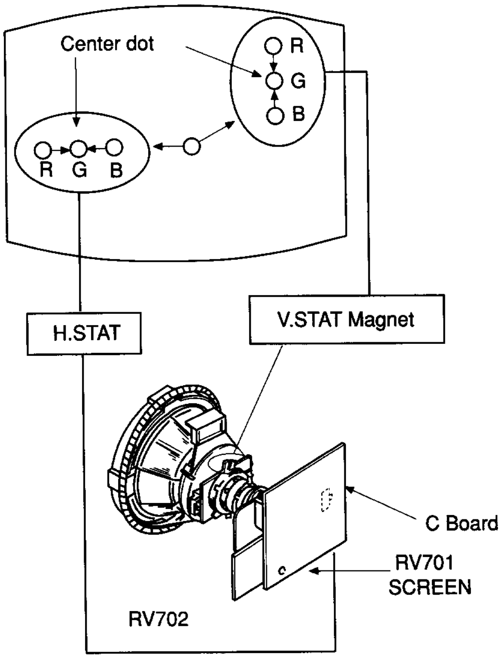
Fig. 3-4

## 3-2. CONVERGENCE

**Preparation:**

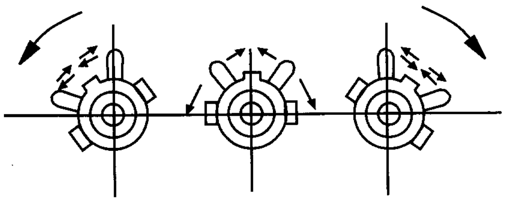
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide a dot pattern.

### (1) Horizontal and vertical static convergence



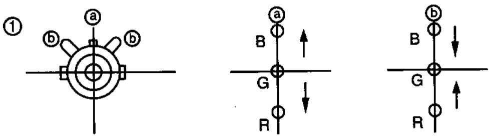
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the centre of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the centre of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the centre of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V.STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

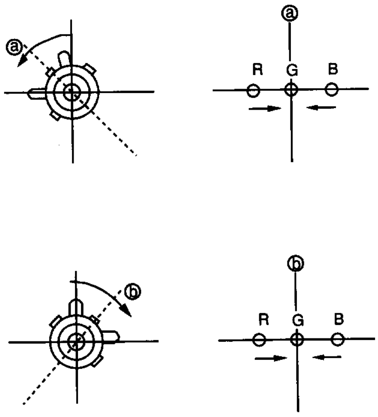


4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

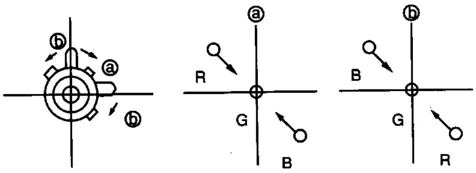
①



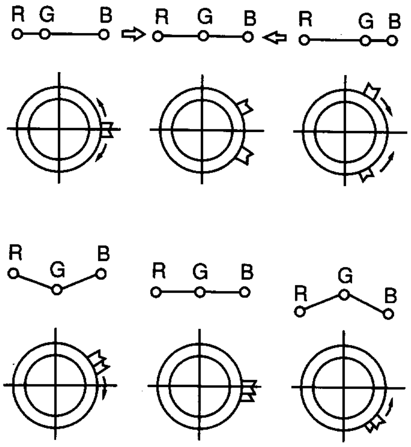
②



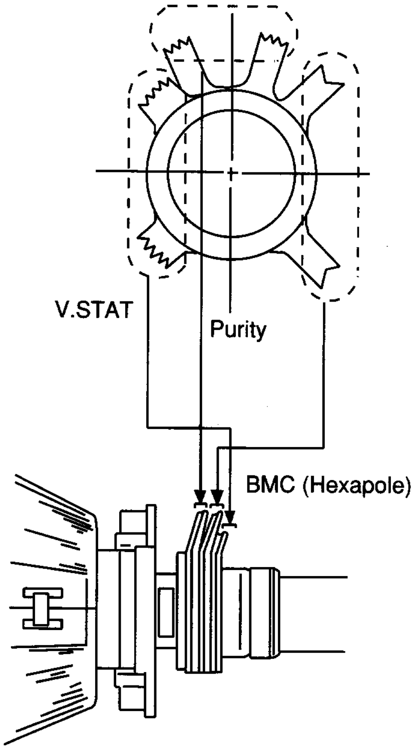
③



- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R G B
R G B
R G B

- The respective dot position resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the centre of the screen (by moving the dots in the horizontal direction).

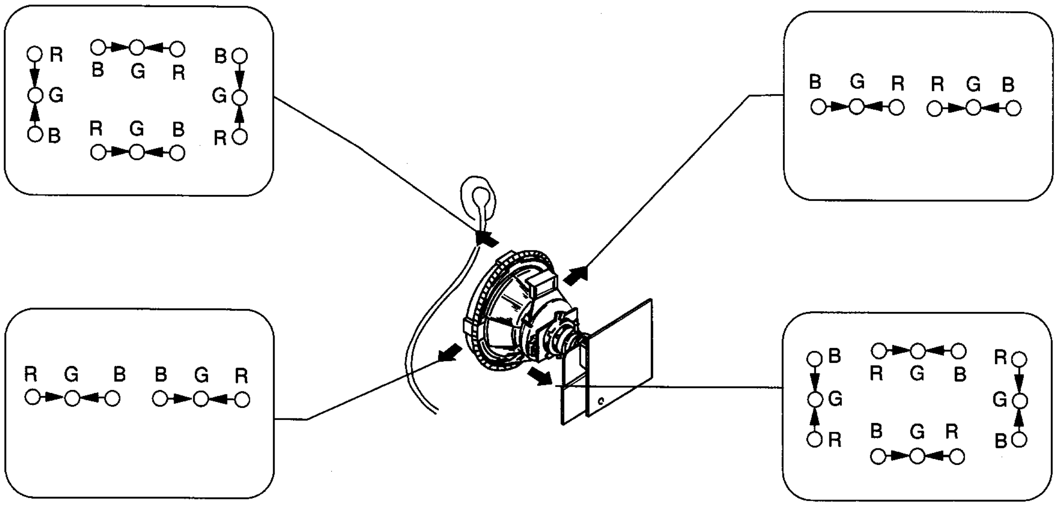

V.STAT
Purity
BMC (Hexapole)

## (2) Dynamic convergence adjustment.

**Preparation:**

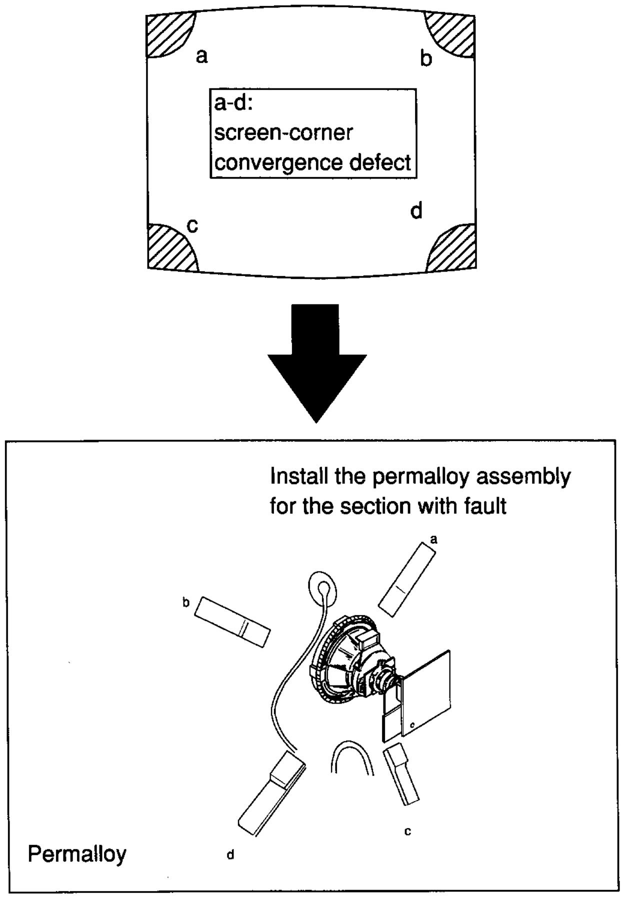
- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Re-install the deflection yoke spacer.


R G B
B G R
R G B
B G R
B G R R G B
R G B B G R
B G R
R G B
B G R
R G B

### (3) Screen corner convergence.

If you are unable to adjust the corner convergence properly, correct them with the use of permalloy assemblies.



Install the permalloy assembly for the section with fault

## 3-3. WHITE BALANCE

### G2 Setting

1. Switch the set into AV mode (apply no signal to the AV connectors).
2. Connect a Volt Meter to Test Point 1 on the A board.
3. Adjust RV01 to obtain a voltage of 3.0V ±0.3V.

### White balance adjustment

1. Input an all white signal from the pattern generator.
2. Enter into the service mode.
3. Enter into Picture Adjustment service menu.
4. Select sub-contrast and adjust to 7.
5. Select the Green Drive and adjust so that the white balance becomes optimum.
6. Select the Blue Drive and adjust so that the white balance becomes optimum.
7. Press the TV button to return to TV operation.

PICTURE ADJUSTMENT

| | |
|---|---|
| AFC mode | 1 |
| REF position | 2 |
| SCP BGR | 1 |
| SCP BGF | 1 |
| Trap Fo | 0 |
| Sub contrast | Adj |
| Sub colour | Adj |
| Sub brightness | Adj |
| Sub hue | Adj |
| Green drive | Adj |
| Blue drive | Adj |
| Green cutoff | Adj |
| Blue cutoff | Adj |
| Gamma | 0 |
| Pre / overshoot | 0 |
| Y delay | 3 |

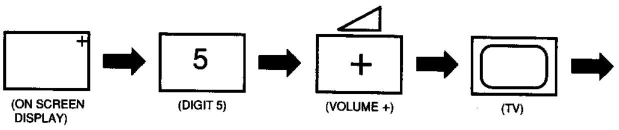
# SECTION 4
# CIRCUIT ADJUSTMENTS

## 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander RM-862.

### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set and enter into standby mode.
2. Press the following sequence of buttons on the Remote Commander.



"TT-- " will appear in the top right corner of the screen. Other status information will also be displayed.

3. Press MENU on the commander to obtain the following menu on the screen.

TEST MENU

> Picture adjustment
Geometry
Wide
MSP
IC status
Current TV status

4. Move to the corresponding adjustment using the ⬇ button on the commander.
5. Press the + button to enter the selected adjustment.
6. Turn off the power to quit the service mode when adjustments are completed.

| PICTURE ADJUSTMENT | |
|---|---|
| AFC mode | 1 |
| REF position | 3 |
| SCP BGR | 1 |
| SCP BGF | 1 |
| Trap Fo | 7 |
| Sub contrast | Adj |
| Sub colour | Adj |
| Sub brightness | Adj |
| Sub hue | Adj |
| Green drive | Adj |
| Blue drive | Adj |
| Green cutoff | Adj |
| Blue cutoff | Adj |
| Gamma | 0 |
| Pre / overshoot | 0 |
| Y delay | 5 |

| GEOMETRY ADJUSTMENT | |
|---|---|
| V Size | Adj |
| V Position | Adj |
| S Correction | Adj |
| V Linearity | Adj |
| H Size | Adj |
| H Position | Adj |
| Pin Amp | Adj |
| Pin Phase | Adj |
| AFC Bow | Adj |
| AFC Angle | Adj |
| EHT V | Adj |
| EHT H | Adj |
| Corner Pin | Adj |

| WIDE | |
|---|---|
| V Aspect | 43 |
| V Scroll | 31 |
| Upper V Lin | 0 |
| Lower V Lin | 0 |
| Left Blanking | 1 |
| Right Blanking | 11 |

| | |
|---|---|
| MSP | |
| AGC ON/OFF | ON |
| Constant gain CDB | 0 |
| FM prescale FMP | 36 |
| Zwei mono-st WHI | 36 |
| Zwei st-mono WLO | 18 |
| Zwei mono-bi WMH | 36 |
| Zwei bi-mono WLO | 18 |
| Time zwei WML | 41 |
| Fawct limit | 10 |
| Fawct soll init FAW | 12 |
| Fawer tol | 2 |
| Nicam Err Max CCT | 10 |
| Nicam Err Min | 0 |
| Nicam Prescale NIP | 97 |
| Time Nicam | 31 |
| Carrier mute CRM | OFF |
| Audio clock ACO | HIZ |
| Scart prescale | 25 |
| Scart volume | 64 |

| | |
|---|---|
| IC STATUS (CXA2000 / CXA2040) | |
| CXA2000 | |
| H lock | 1 |
| IKR | 1 |
| VNG | 0 |
| X-RAY | 0 |
| Colour system | 3 |
| CV1 Sync | 1 |
| CXA2040 | |
| Sync sep | 1 |
| S1 mode pin | 01 |
| S2 mode pin | 01 |
| TUNER | |
| Tuner status | 01101011 |

| | |
|---|---|
| TV STATUS | |
| Text system | C TEXT/TV TEXT |
| Dolby | NO/YES |
| Text language set | WEST/EAST/RUSSIAN |
| Menu language set | WEST/EAST/RUSSIAN |
| Destination | B/D/U/K/L/E/A/R |
| Scart 16:9 | OFF/ON |
| RGB priority | OFF/ON |
| Ageing | OFF/ON |
| Size | 29/25 |
| Colour trap sw | SECAM/ALL |
| Velocity mod | ON/OFF |
| AFT STATUS | WINDOW/HIGH/LOW |

## SUB BRIGHTNESS ADJUSTMENT

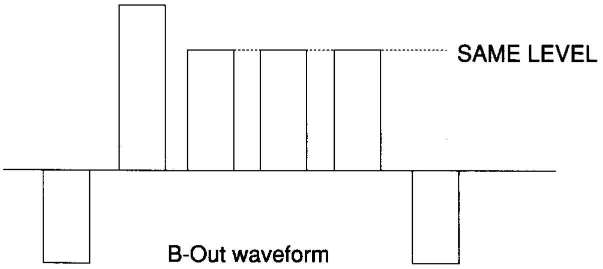
1. Input a Phillips pattern.
2. Set the picture control to minimum.
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the Sub-Brightness data so that there is barely a difference between the 0 IRE and 10 IRE signal.

## SUB CONTRAST ADJUSTMENT

1. Input a video that contains a small 100% area on a black background.
2. Set the picture control to maximum.
3. Connect an oscilloscope to pin 3 of CN301 (A board).
4. Enter into the Picture Adjustment Service Menu.
5. Adjust the Sub-contrast data to obtain a black to white amplitude of 2.50 volts.

## SUB COLOUR ADJUSTMENT

1. Receive a PAL Colour Bar video signal.
2. Connect an oscilloscope to pin 3 of CN301 (A board).
3. Enter into the Picture Adjustment Service Menu.
4. Adjust the sub colour data so that cyan, magenta and blue colour bars are of equal height.



NOTE: The data shown in the TV STATUS table is dependant on destination, screen size and country.

## SYSTEM B/G, D/K, I & L I.F ADJUSTMENT

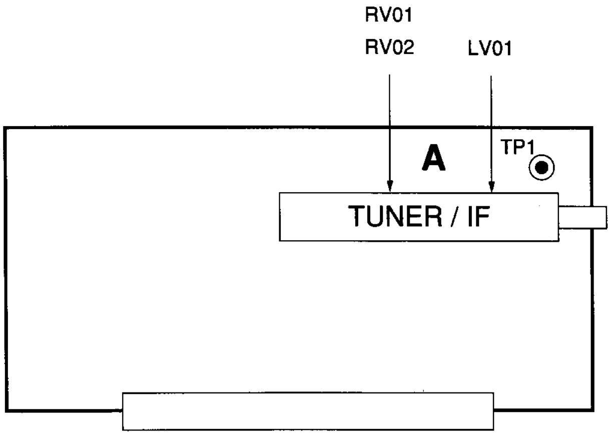
1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 38.9 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the I.F coil (LV01) until the "AFT Status" indicates a " Window " condition.

## SYSTEM L BAND 1 I.F ADJUSTMENT

1. Input an off air signal of between 60-100dBuV / 75 ohm terminated, via the tuner socket.
2. Enter into the I.F adjustment service mode (i.e. " TT 59 " ) to fix the I.F frequency to 34.2 MHz.
3. Enter into the service mode and select "Current TVStatus".
4. Adjust the RV02 until the "AFT Status" indicates a " Window " condition.

## TUNER AGC ADJUSTMENT

1. Receive a signal of 63dBuV / 75 ohm terminated via the tuner socket.
2. Measure the voltage at test point 1 (A board).
3. Adjust RV01 to obtain a voltage of 3.0V ± 0.3V.



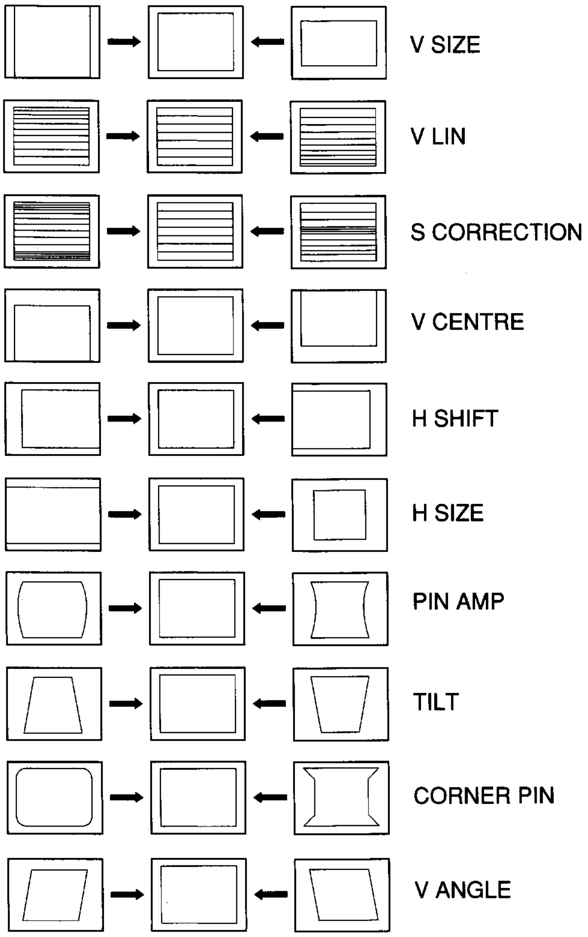
- A Board component side -

## DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the Geometry Adjustment Service Menu.
2. Select and adjust each item in order to obtain the optimum image.

GEOMETRY ADJUSTMENT

| | |
|---|---|
| V Size | Adj |
| V Position | Adj |
| S Correction | Adj |
| V Linearity | Adj |
| H Size | Adj |
| H Position | Adj |
| Pin Amp | Adj |
| Pin Phase | Adj |
| AFC Bow | Adj |
| AFC Angle | Adj |
| EHT V | Adj |
| EHT H | Adj |
| Corner Pin | Adj |



## 4-2. TEST MODE 2:

Is available by pressing Test button twice, OSD " TT " appears. The functions described below are available by pressing the two numbers. To release the Test mode 2, press 0 twice, or switch the TV into stand-by mode.

| | |
|---|---|
| 00 | Switch test mode 2 off |
| 01 | Picture maximum |
| 02 | Picture minimum |
| 03 | Volume 30% |
| 04 | Set service menu mode |
| 05 | Set production menu mode |
| 06 | Volume 80% |
| 07 | Set ageing condition |
| 08 | Set shipping condition |
| 09 | Language reset |
| 10 | No function |
| 11 | Adjustment without OSD |
| 12 | Dummy |
| 13 | Display TV configuration |
| 14 | Forced AV 6:9 mode |
| 15 | Reset LPM from ROM data |
| 16 | copy LPM to reset memory |
| 17 | Preset label for AV sources |
| 18 | RGB priority on/off |
| 19 | Clear all preset labels |
| 20 | No function |
| 21 | Sub contrast |
| 22 | Sub colour |
| 23 | Sub brightness |
| 24 | Set destination = U |
| 25 | Set destination = D |
| 26 | Set destination = B |
| 27 | Set destination = K |
| 28 | Set destination = L |
| 29 | Set destination = E |
| 30 | No function |
| 31 | Set destination =A |
| 32 | Dummy |
| 33 | Auto AGC |
| 34 | Dummy |
| 35 | Manual AGC adjust |

| | |
|---|---|
| 36-40 | Dummy |
| 41 | Re-initialise NVM |
| 42 | Production use only |
| 43 | Initialise geometry settings |
| 44 | Initialise all favourite pages = 100 |
| 45 | Channel locks = off |
| 46 | Dealer commander mode |
| 47 | Default MSP settings |
| 48 | Restore NVM test byte |
| 49 | Delete NVM test byte |
| 50-60 | No function |
| 61 | Turn on Dolby Pro Logic mode |
| 62 | White noise to left speaker |
| 63 | White noise to right speaker |
| 64 | White noise to centre speaker |
| 65 | White noise to rear speaker |
| 66 | Set standard stereo mode |
| 67 | Set Pro Logic normal mode |
| 68 | Set Pro Logic wide mode |
| 69 | Set Pro Logic phantom mode |
| 70 | No function |
| 71 | Picture rotation on/off |
| 72 | Dolby register settings |
| 74 | No function |
| 75 | Reset picture colour balance |
| 76 | Reset picture geometry |
| 77 | Reset sound settings |
| 78 | Reset error codes in the NVM |
| 79-99 | No function |

## 4-3. BE-3D SELF DIAGNOSTIC SOFTWARE

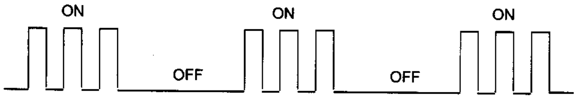
The identification of errors within the BE-3D chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to IIC. In the event of one of these situations arising the software will first try to release the bus if busy (Failure to do so will report with continuous flashing LED) and then communicate with each device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the led (Series of flashes which must be counted) See Table 1, non fatal errors are reported with this method.

**Table 1**

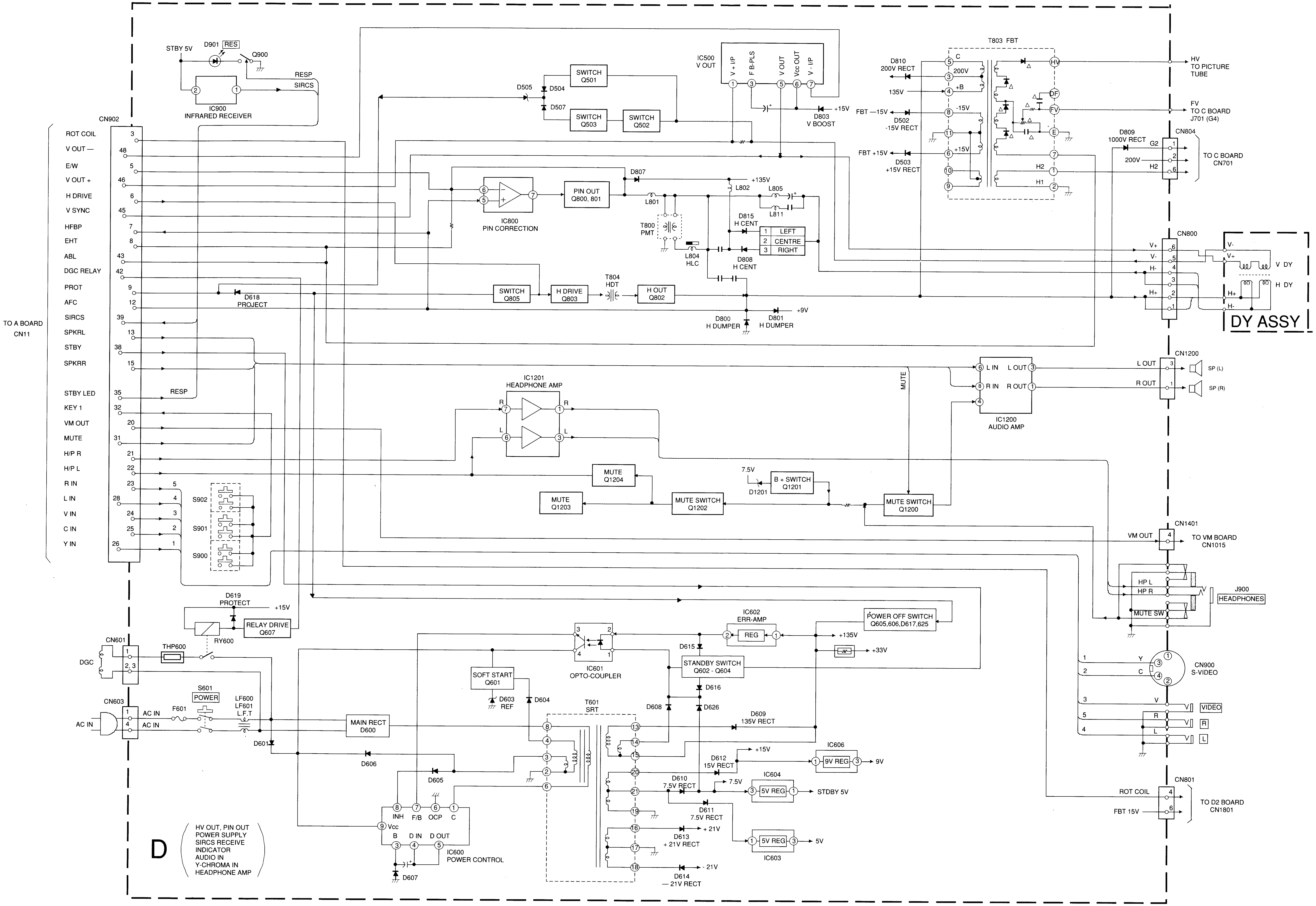
| ERROR | LED ERROR COUNT |
|---|---|
| Protection circuit trip < ANY TIME > | 02 |
| IIC SCL LOW < POWER UP ONLY > | 03 |
| IIC SDA LOW < POWER UP ONLY > | 04 |
| IIC SDA & SCL LOW < POWER UP ONLY > | 05 |
| Jungle/Choroma controller no acknowledge < POWER UP ONLY > | 06 |
| Video Switch no acknowledge < POWER UP ONLY > | 07 |
| Tuner no acknowledge | 08 |
| MSP no acknowledge | 09 |
| NVM no acknowledge | 10 |
| M3L TXD LOW < POWER UP ONLY > | 11 |
| M3L RXD LOW < POWER UP ONLY > | 12 |
| M3L ENABLE LOW < POWER UP ONLY > | 13 |
| M3L TXD & RXD LOW < POWER UP ONLY > | 14 |
| Compact Text test fail < POWER UP ONLY > | 15 |
| AV switch cannot power on reset | 16 |
| Cannot initialise jungle | 17 |
| NVM acknowledge fail after initialisation | 18 |
| Multiple devices with no acknowledge < POWER UP ONLY > | 19 |
| Compacttext run-time failure | 20 |
| AVSWITCH response failure after power up | 21 |
| JUNGLE/CHROMA controller response failure after power up | 22 |
| CompactText does not respond | 23 |

Flash Timing Example : e.g. error number 3.

Stby LED



## 5-1. BLOCK DIAGRAM (1)

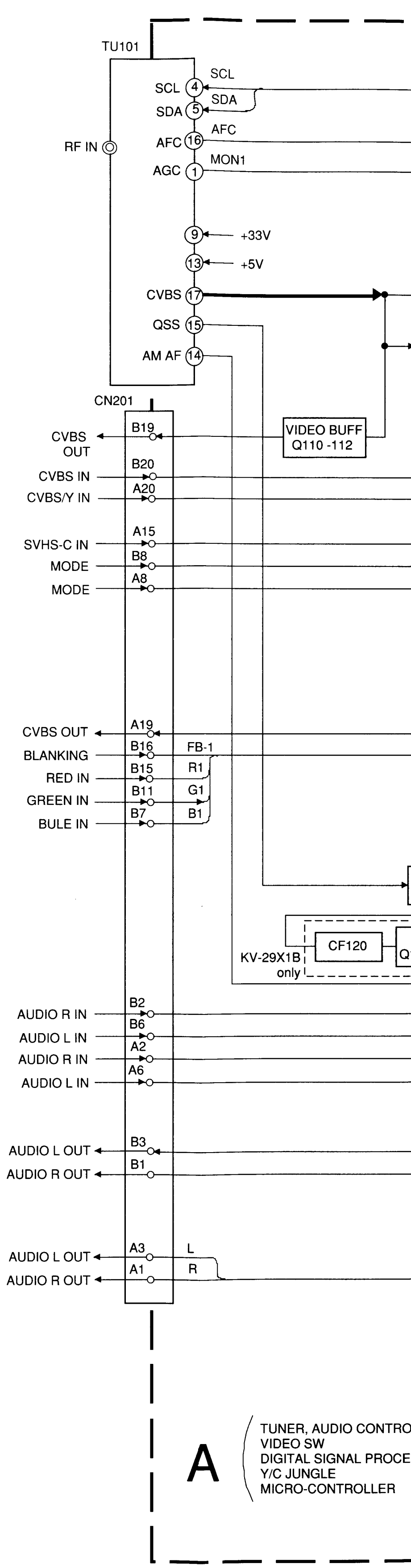


STBY 5V
D901 RES
Q900
RESP
SIRCS
IC900 INFRARED RECEIVER
CN902
ROT COIL
V OUT —
E/W
V OUT +
H DRIVE
V SYNC
HFBP
EHT
ABL
DGC RELAY
PROT
AFC
SIRCS
SPKRL
STBY
SPKRR
STBY LED
KEY 1
VM OUT
MUTE
H/P R
H/P L
R IN
L IN
V IN
C IN
Y IN
TO A BOARD CN11
D505
D504
D507
SWITCH Q501
SWITCH Q503
SWITCH Q502
IC500 V OUT
V + I/P
F B-PLS
V OUT
Vcc OUT
V - I/P
D803 V BOOST
+15V
D807
+135V
IC800 PIN CORRECTION
PIN OUT Q800, 801
L801
L802
L805
L811
T800 PMT
D815 H CENT
LEFT
CENTRE
RIGHT
L804 HLC
D808 H CENT
SWITCH Q805
H DRIVE Q803
T804 HDT
H OUT Q802
D800 H DUMPER
D801 H DUMPER
+9V
D618 PROJECT
T803 FBT
D810 200V RECT
135V
FBT —15V
D502 -15V RECT
FBT +15V
D503 +15V RECT
200V
+B
-15V
+15V
HV
DF
FV
E
H2
H1
HV TO PICTURE TUBE
FV TO C BOARD J701 (G4)
D809 1000V RECT
G2
200V
CN804
TO C BOARD CN701
CN800
V+
V-
H-
H+
DY ASSY
V DY
H DY
CN1200
L OUT
R OUT
SP (L)
SP (R)
MUTE
IC1200 AUDIO AMP
L IN
R IN
IC1201 HEADPHONE AMP
MUTE Q1204
MUTE Q1203
MUTE SWITCH Q1202
7.5V
D1201
B + SWITCH Q1201
MUTE SWITCH Q1200
S902
S901
S900
CN1401
VM OUT
TO VM BOARD CN1015
HP L
HP R
MUTE SW
J900 HEADPHONES
D619 PROTECT
+15V
RELAY DRIVE Q607
RY600
CN601
DGC
THP600
CN603
AC IN
F601
S601 POWER
LF600 LF601 L.F.T
D601
MAIN RECT D600
D606
D605
SOFT START Q601
D603 REF
D604
IC601 OPTO-COUPLER
IC602 ERR-AMP
REG
+135V
+33V
POWER OFF SWITCH Q605,606,D617,625
D615
STANDBY SWITCH Q602 - Q604
D616
D626
D608
T601 SRT
D609 135V RECT
D612 15V RECT
+15V
IC606
9V REG
9V
D610 7.5V RECT
7.5V
IC604
5V REG
STDBY 5V
D611 7.5V RECT
D613 + 21V RECT
+ 21V
IC603
5V
D614 — 21V RECT
- 21V
INH
F/B
OCP
C
Vcc
B
D IN
D OUT
IC600 POWER CONTROL
D607
CN900 S-VIDEO
VIDEO
R
L
CN801
ROT COIL
FBT 15V
TO D2 BOARD CN1801

D

HV OUT, PIN OUT
POWER SUPPLY
SIRCS RECEIVE
INDICATOR
AUDIO IN
Y-CHROMA IN
HEADPHONE AMP

## BLOCK DIAGRAM (

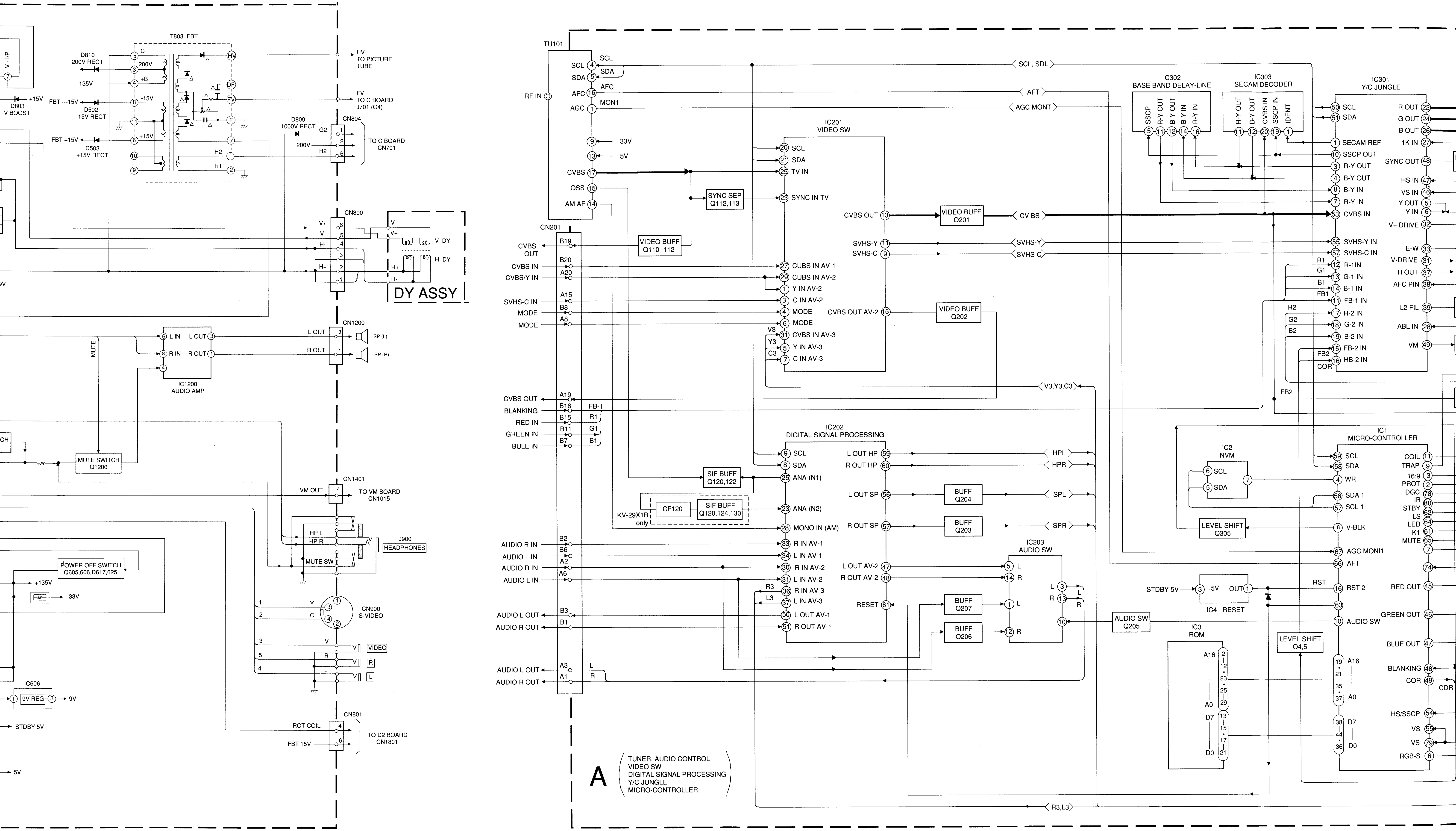


TU101
RF IN
SCL
SDA
AFC
AGC
MON1
+33V
+5V
CVBS
QSS
AM AF
CN201
CVBS OUT
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
MODE
VIDEO BUFF Q110 -112
CVBS OUT
BLANKING
RED IN
GREEN IN
BULE IN
FB-1
R1
G1
B1
KV-29X1B only
CF120
AUDIO R IN
AUDIO L IN
AUDIO R IN
AUDIO L IN
AUDIO L OUT
AUDIO R OUT
AUDIO L OUT
AUDIO R OUT

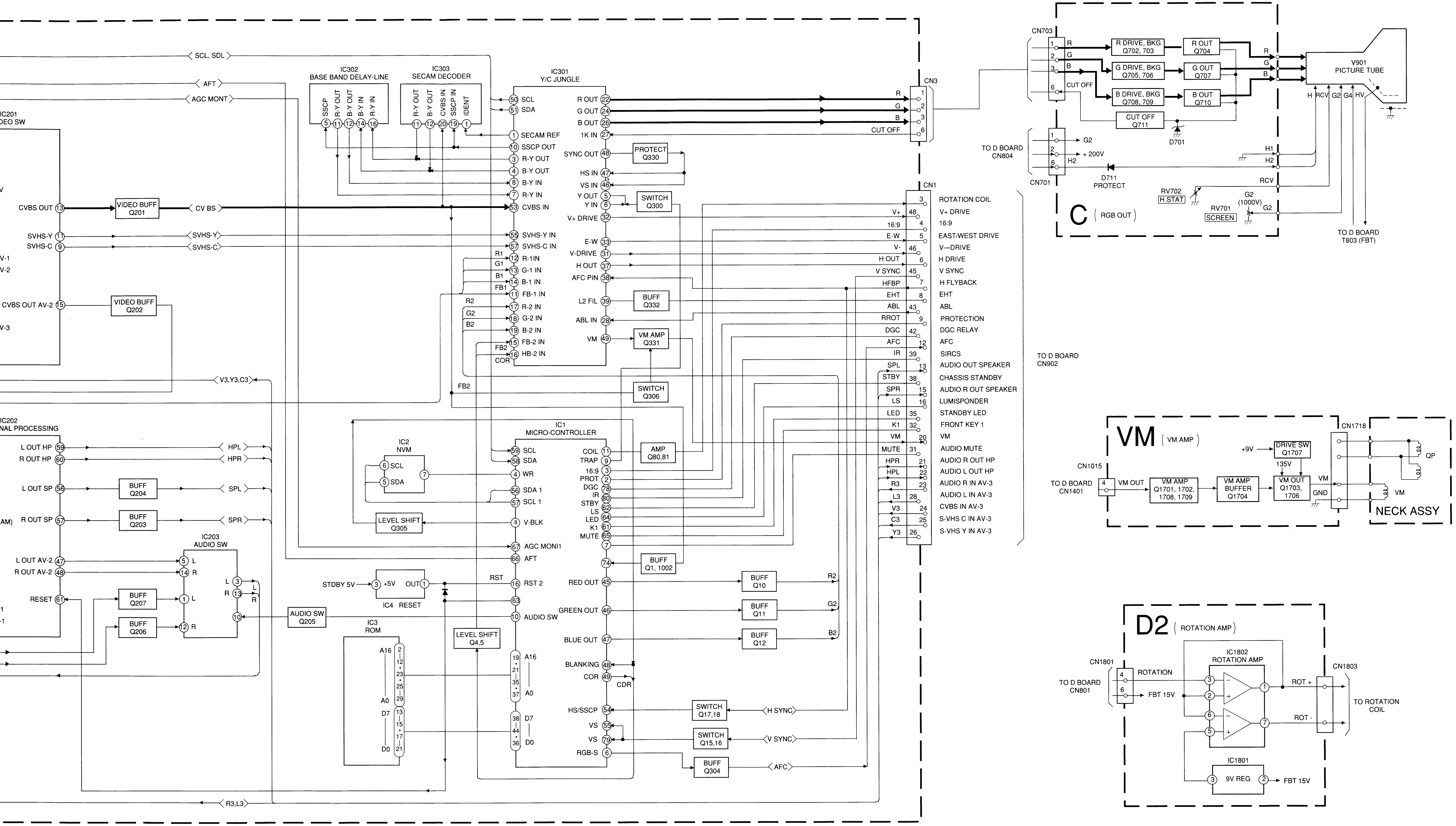
A

TUNER, AUDIO CONTRO
VIDEO SW
DIGITAL SIGNAL PROCE
Y/C JUNGLE
MICRO-CONTROLLER

# BLOCK DIAGRAM (2)

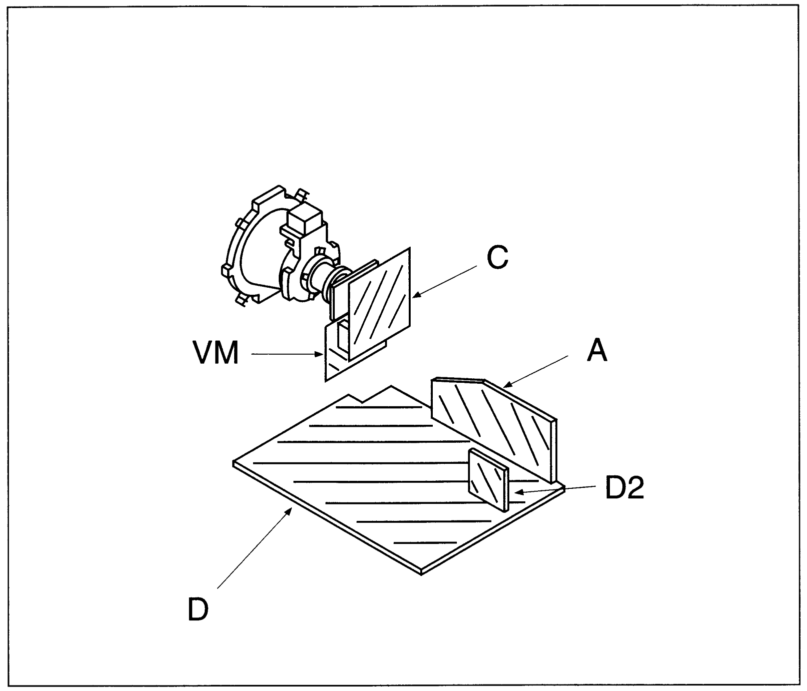


V - I/P
D803
V BOOST
+15V
T803 FBT
D810
200V RECT
135V
+B
200V
FBT —15V
D502
-15V RECT
-15V
FBT +15V
D503
+15V RECT
+15V
HV
TO PICTURE TUBE
FV
TO C BOARD
J701 (G4)
DF
E
D809
1000V RECT
G2
200V
H2
H1
CN804
TO C BOARD
CN701
CN800
V+
V-
H-
H+
V DY
H DY
DY ASSY
9V
MUTE
L IN
R IN
L OUT
R OUT
IC1200
AUDIO AMP
CN1200
SP (L)
SP (R)
CH
MUTE SWITCH
Q1200
CN1401
VM OUT
TO VM BOARD
CN1015
HP L
HP R
MUTE SW
J900
HEADPHONES
POWER OFF SWITCH
Q605,606,D617,625
+135V
+33V
Y
C
CN900
S-VIDEO
V
VIDEO
R
L
IC606
9V REG
9V
STDBY 5V
5V
CN801
ROT COIL
FBT 15V
TO D2 BOARD
CN1801
TU101
RF IN
SCL
SDA
AFC
AGC
MON1
+33V
+5V
CVBS
QSS
AM AF
SCL, SDL
AFT
AGC MONT
IC201
VIDEO SW
TV IN
SYNC IN TV
SYNC SEP
Q112,113
VIDEO BUFF
Q110 -112
CN201
CVBS OUT
CVBS IN
CVBS/Y IN
SVHS-C IN
MODE
CUBS IN AV-1
CUBS IN AV-2
Y IN AV-2
C IN AV-2
CVBS IN AV-3
Y IN AV-3
C IN AV-3
V3
Y3
C3
CVBS OUT
VIDEO BUFF
Q201
CV BS
SVHS-Y
SVHS-C
CVBS OUT AV-2
VIDEO BUFF
Q202
V3,Y3,C3
BLANKING
RED IN
GREEN IN
BULE IN
FB-1
R1
G1
B1
IC202
DIGITAL SIGNAL PROCESSING
L OUT HP
R OUT HP
HPL
HPR
ANA-(N1)
SIF BUFF
Q120,122
CF120
SIF BUFF
Q120,124,130
KV-29X1B only
ANA-(N2)
MONO IN (AM)
L OUT SP
R OUT SP
BUFF
Q204
BUFF
Q203
SPL
SPR
AUDIO R IN
AUDIO L IN
R IN AV-1
L IN AV-1
R IN AV-2
L IN AV-2
R3
L3
R IN AV-3
L IN AV-3
L OUT AV-1
R OUT AV-1
L OUT AV-2
R OUT AV-2
RESET
AUDIO L OUT
AUDIO R OUT
IC203
AUDIO SW
BUFF
Q207
BUFF
Q206
AUDIO SW
Q205
R3,L3
IC302
BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303
SECAM DECODER
CVBS IN
SSCP IN
IDENT
IC301
Y/C JUNGLE
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1IN
G-1 IN
B-1 IN
FB-1 IN
R2
G2
B2
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
FB2
COR
R OUT
G OUT
B OUT
1K IN
SYNC OUT
HS IN
VS IN
Y OUT
Y IN
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
ABL IN
VM
IC2
NVM
WR
LEVEL SHIFT
Q305
IC1
MICRO-CONTROLLER
SDA 1
SCL 1
V-BLK
AGC MONI1
AFT
RST
RST 2
STDBY 5V
+5V
OUT
IC4 RESET
AUDIO SW
LEVEL SHIFT
Q4,5
IC3
ROM
A16
A0
D7
D0
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
RED OUT
GREEN OUT
BLUE OUT
BLANKING
COR
CDR
HS/SSCP
VS
RGB-S
A
TUNER, AUDIO CONTROL
VIDEO SW
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE
MICRO-CONTROLLER



IC201
VIDEO SW
CVBS OUT 13
VIDEO BUFF Q201
CV BS
SVHS-Y 11
SVHS-C 9
CVBS OUT AV-2 15
VIDEO BUFF Q202
SCL, SDL
AFT
AGC MONT
V3,Y3,C3
IC302
BASE BAND DELAY-LINE
SSCP
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
IC303
SECAM DECODER
R-Y OUT
B-Y OUT
CVBS IN
SSCP IN
IDENT
IC301
Y/C JUNGLE
SCL
SDA
SECAM REF
SSCP OUT
R-Y OUT
B-Y OUT
B-Y IN
R-Y IN
CVBS IN
SVHS-Y IN
SVHS-C IN
R-1IN
G-1 IN
B-1 IN
FB-1 IN
R-2 IN
G-2 IN
B-2 IN
FB-2 IN
HB-2 IN
R1
G1
B1
FB1
R2
G2
B2
FB2
COR
R OUT
G OUT
B OUT
1K IN
SYNC OUT
HS IN
VS IN
Y OUT
Y IN
V+ DRIVE
E-W
V-DRIVE
H OUT
AFC PIN
L2 FIL
ABL IN
VM
PROTECT Q330
SWITCH Q300
BUFF Q332
VM AMP Q331
SWITCH Q306
CUT OFF
CN3
CN1
ROTATION COIL
V+ DRIVE
16:9
EAST/WEST DRIVE
V—DRIVE
H DRIVE
V SYNC
H FLYBACK
EHT
ABL
PROTECTION
DGC RELAY
AFC
SIRCS
AUDIO OUT SPEAKER
CHASSIS STANDBY
AUDIO R OUT SPEAKER
LUMISPONDER
STANDBY LED
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO L OUT HP
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
S-VHS C IN AV-3
S-VHS Y IN AV-3
V+
16:9
E-W
V-
H OUT
V SYNC
HFBP
EHT
ABL
RROT
DGC
AFC
IR
SPL
STBY
SPR
LS
LED
K1
VM
MUTE
HPR
HPL
R3
L3
V3
C3
Y3
TO D BOARD CN902
IC202
SIGNAL PROCESSING
L OUT HP
R OUT HP
L OUT SP
R OUT SP
HPL
HPR
SPL
SPR
BUFF Q204
BUFF Q203
IC203
AUDIO SW
L OUT AV-2
R OUT AV-2
RESET
BUFF Q207
BUFF Q206
AUDIO SW Q205
R3,L3
IC2
NVM
SCL
SDA
LEVEL SHIFT Q305
IC1
MICRO-CONTROLLER
SCL
SDA
WR
SDA 1
SCL 1
V-BLK
AGC MONI1
AFT
RST 2
AUDIO SW
A16
A0
D7
D0
COIL
TRAP
16:9
PROT
DGC
IR
STBY
LS
LED
K1
MUTE
RED OUT
GREEN OUT
BLUE OUT
BLANKING
COR
CDR
HS/SSCP
VS
VS
RGB-S
AMP Q80,81
BUFF Q1, 1002
BUFF Q10
BUFF Q11
BUFF Q12
SWITCH Q17,18
SWITCH Q15,16
BUFF Q304
H SYNC
V SYNC
AFC
STDBY 5V
+5V
OUT
IC4 RESET
RST
IC3
ROM
LEVEL SHIFT Q4,5
C
( RGB OUT )
CN703
R DRIVE, BKG Q702, 703
G DRIVE, BKG Q705, 706
B DRIVE, BKG Q708, 709
R OUT Q704
G OUT Q707
B OUT Q710
CUT OFF Q711
D701
V901
PICTURE TUBE
H RCV G2 G4 HV
TO D BOARD CN804
CN701
G2
+ 200V
H2
D711
PROTECT
H1
H2
RCV
RV702
H STAT
RV701
SCREEN
G2 (1000V)
TO D BOARD T803 (FBT)
VM
( VM AMP )
CN1015
TO D BOARD CN1401
VM OUT
VM AMP Q1701, 1702, 1708, 1709
VM AMP BUFFER Q1704
+9V
DRIVE SW Q1707
135V
VM OUT Q1703, 1706
VM
GND
CN1718
QP
VM
NECK ASSY
D2
( ROTATION AMP )
CN1801
TO D BOARD CN801
ROTATION
FBT 15V
IC1802
ROTATION AMP
IC1801
9V REG
FBT 15V
ROT +
ROT -
CN1803
TO ROTATION COIL

## 5-2. CIRCUIT BOARDS LOCATION



## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

**Note :**

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm
Rating electrical power ¼ W

- ⊏⊐ : nonflammable resistor.
- — : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⫫ : earth - chassis.
- ♯ : no mounted.

**Note :** The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

**Note :** Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

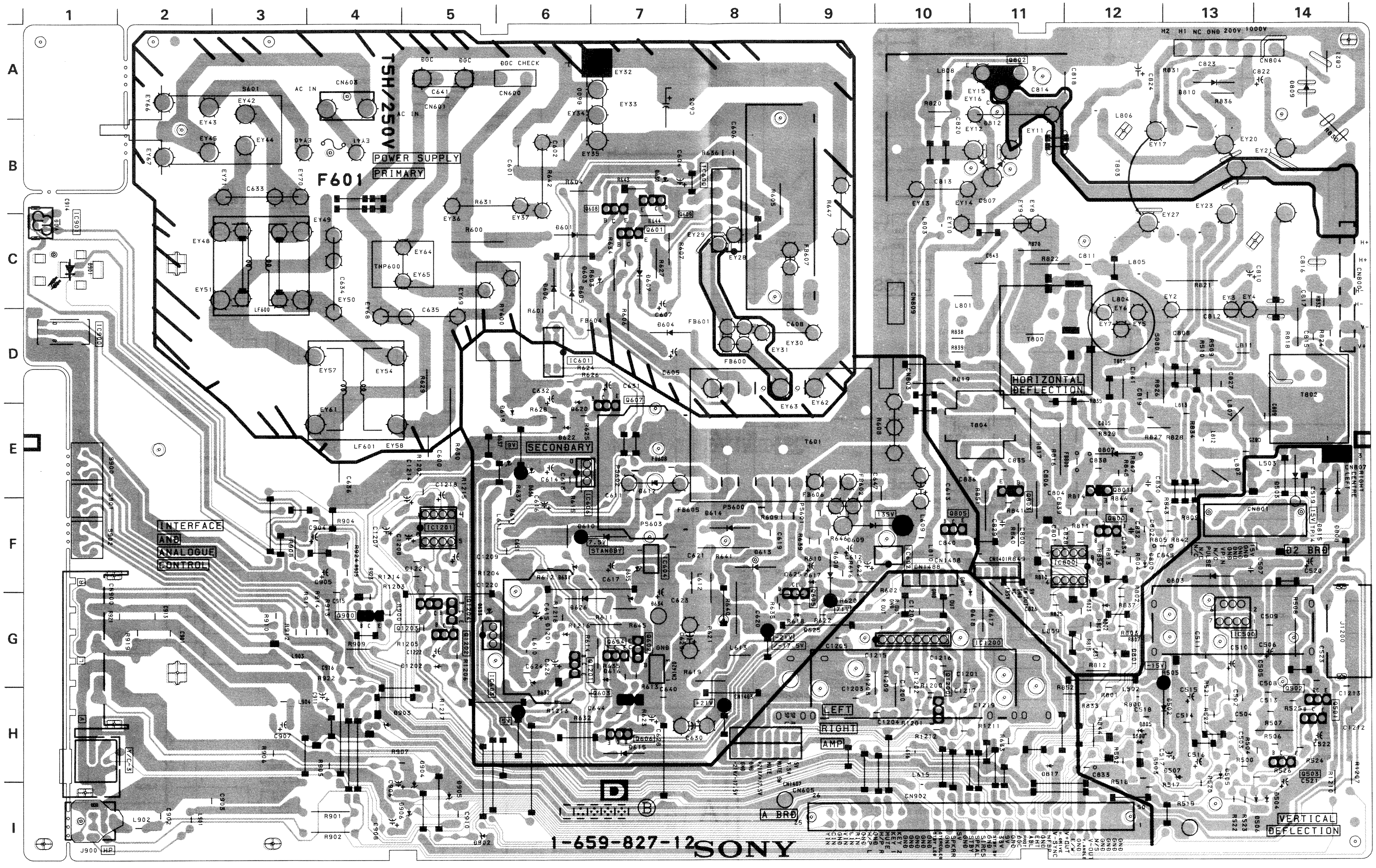
**Reference information**

| | | |
|---|---|---|
| RESISTOR | : RN | METAL FILM |
| | : RC | SOLID |
| | : FPRD | NONFLAMMABLE CARBON |
| | : FUSE | NONFLAMMABLE FUSIBLE |
| | : RS | NONFLAMMABLE METAL OXIDE |
| | : RB | NONFLAMMABLE CEMENT |
| | : RW | NONFLAMMABLE WIREWOUND |
| | : ✕ | ADJUSTABLE RESISTOR |
| COIL | : LF-8L | MICRO INDUCTOR |
| CAPACITOR | : TA | TANTALUM |
| | : PS | STYROL |
| | : PP | POLYPROPYLENE |
| | : PT | MYLAR |
| | : MPS | METALIZED POLYESTER |
| | : MPP | METALIZED POLYPROPYLENE |
| | : ALB | BIPOLAR |
| | : ALT | HIGH TEMPERATURE |
| | : ALR | HIGH RIPPLE |

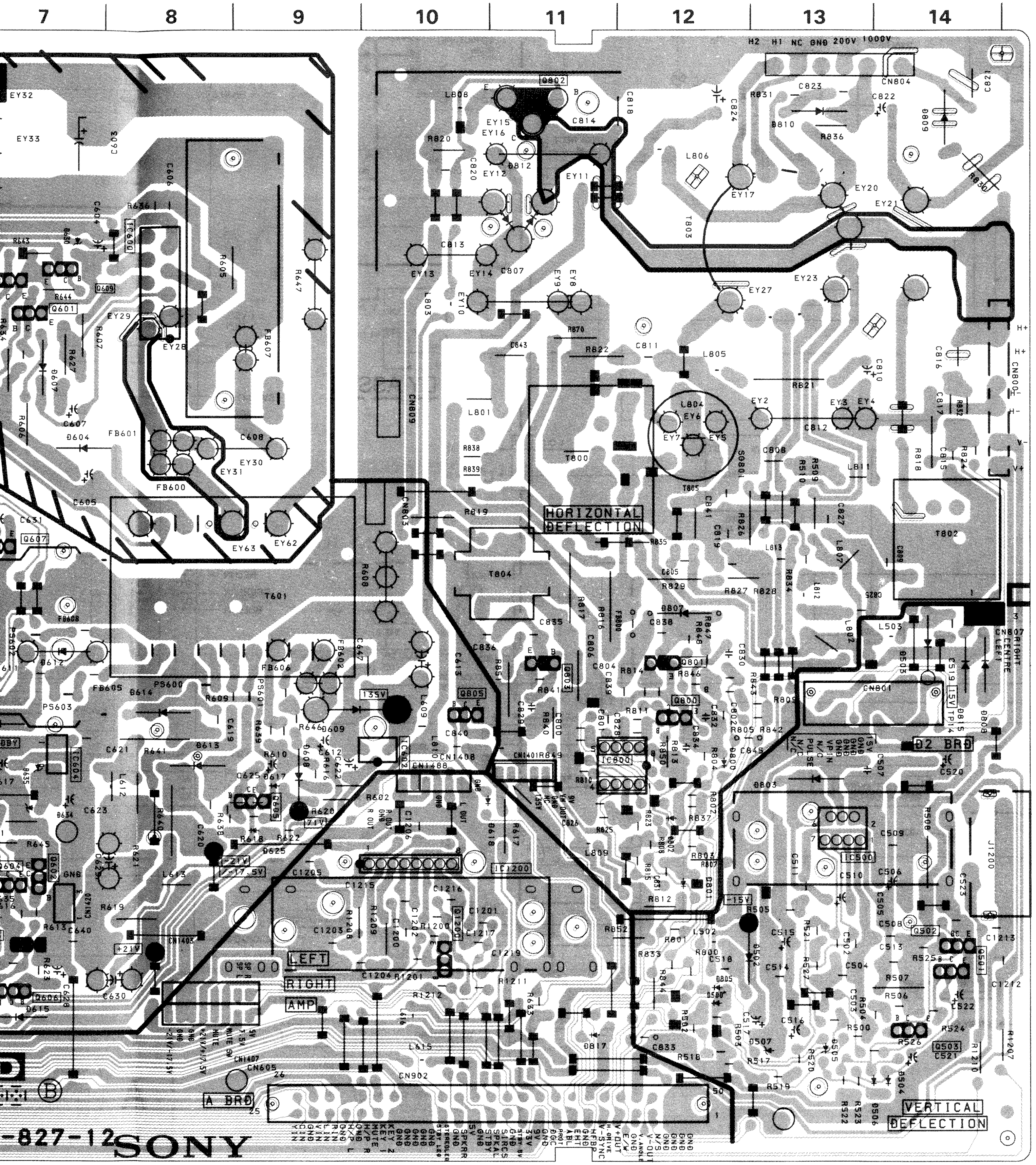
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ➡ : signal path. (RF)

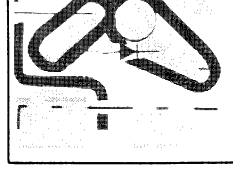
**D** HV OUT, PIN OUT, POWER SUPPLY, CONTROL SW, AUDIO IN
Y-CHROMA IN, HEADPHONE IN, SIRCS RECEIVE, INDICAITON

## D Board



1
2
3
4
5
6
7
8
9
10
11
12
13
14
A
B
C
D
E
F
G
H
I
T5H/250V
POWER SUPPLY
PRIMARY
F601
AC IN
DGC CHECK
SECONDARY
STANDBY
INTERFACE AND ANALOGUE CONTROL
HORIZONTAL DEFLECTION
VERTICAL DEFLECTION
LEFT
RIGHT
AMP
A BRD
D2 BRD
H2 H1 NC GND 200V 1000V
CN804
CN807 RIGHT CENTRE LEFT
T601
T802
T804
T800
IC601
IC1201
IC800
IC500
IC1200
J900 HP
J1200
Y/C-3
1-659-827-12
SONY

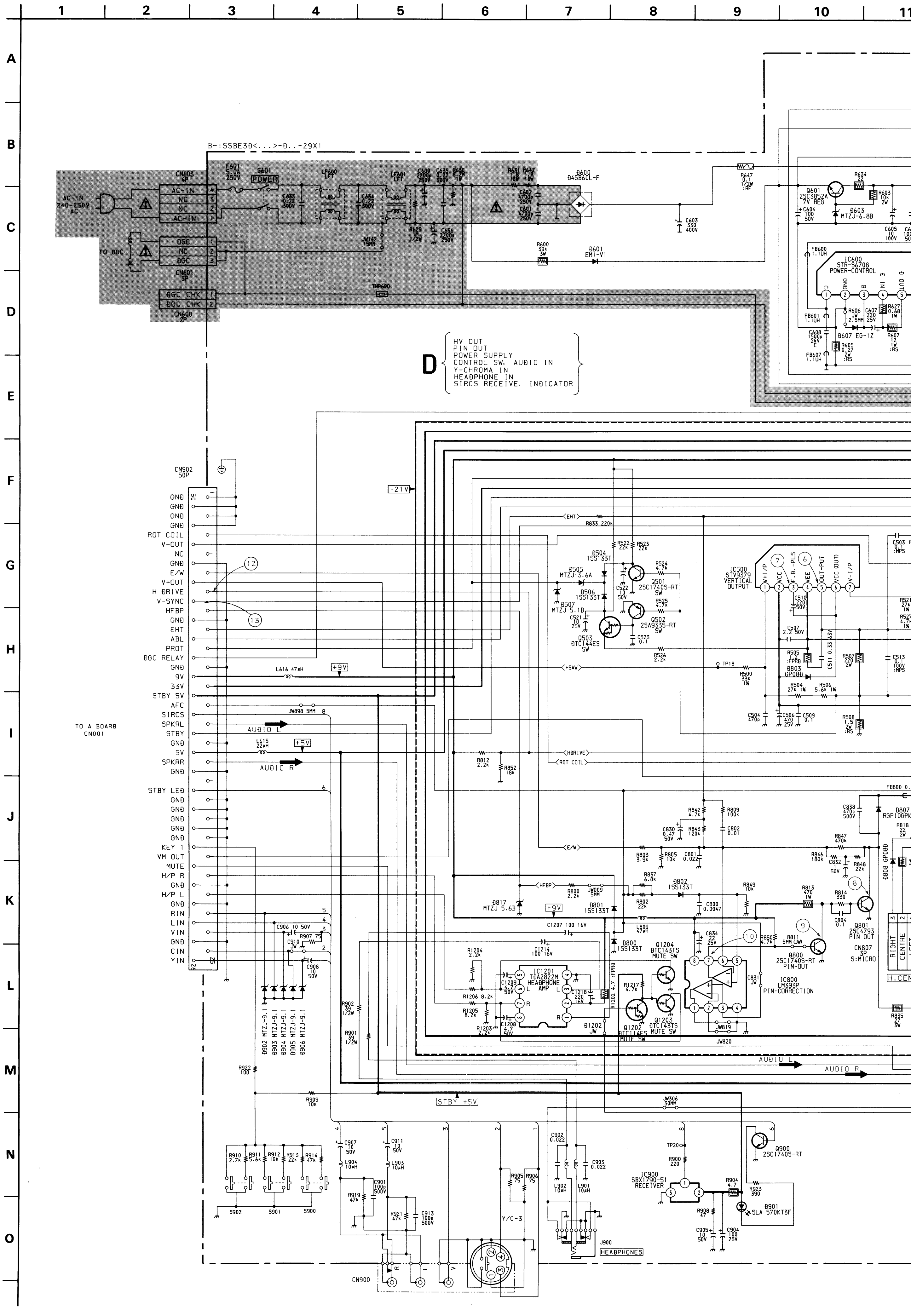

7
8
9
10
11
12
13
14
H2 H1 NC GND 200V 1000V
HORIZONTAL DEFLECTION
VERTICAL DEFLECTION
LEFT
RIGHT
AMP
D2 BRD
A BRD
-827-12
SONY
B

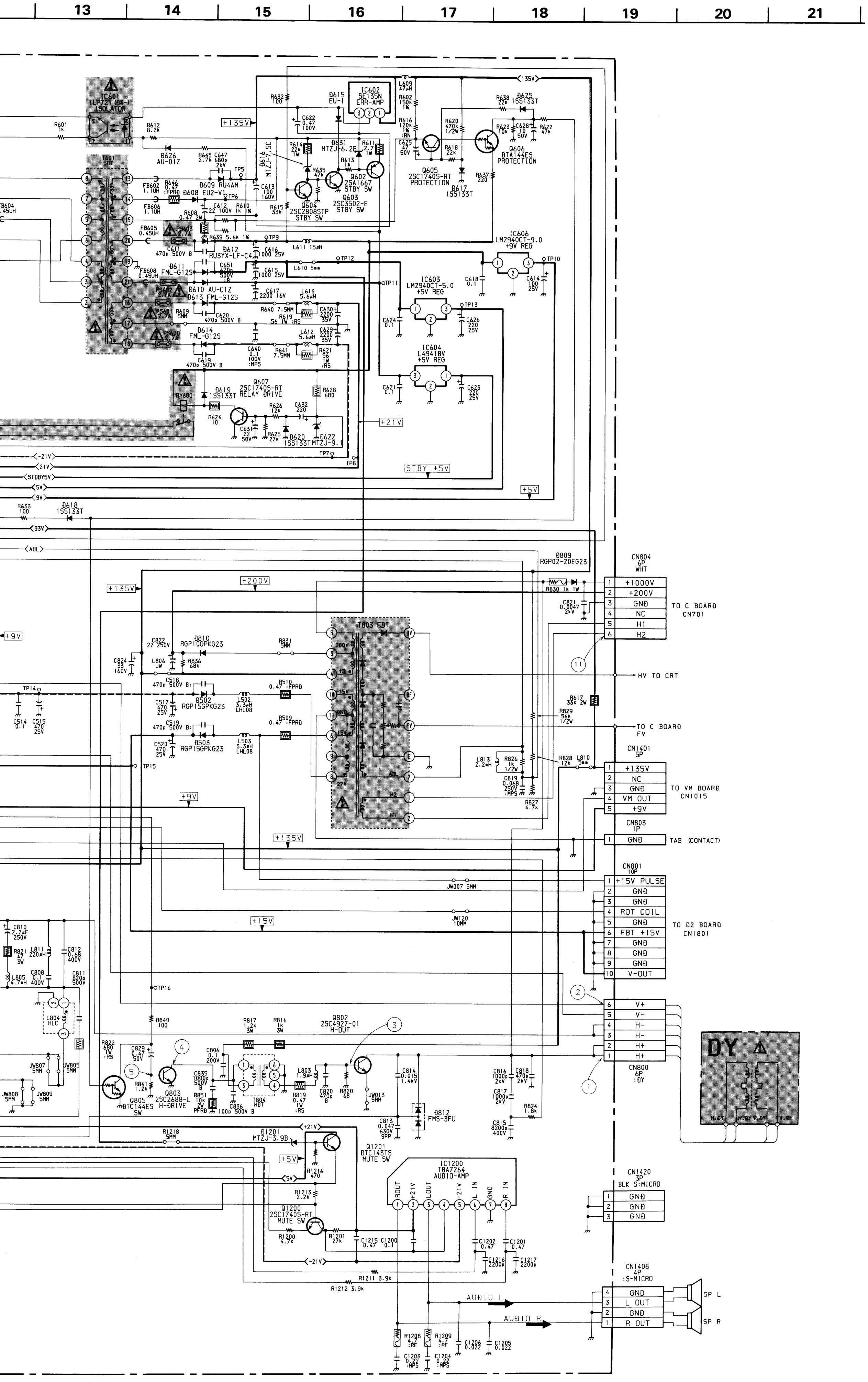


The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

## D BOARD

| IC | | DIODE | |
|---|---|---|---|
| IC500 | G-13 | D600 | A-7 |
| IC600 | B-8 | D601 | C-6 |
| IC601 | D-6 | D603 | C-7 |
| IC602 | F-10 | D604 | D-7 |
| IC603 | G-5 | D605 | C-6 |
| IC604 | F-7 | D606 | C-6 |
| IC606 | E-6 | D607 | C-7 |
| IC800 | F-12 | D608 | F-9 |
| IC900 | D-1 | D609 | F-9 |
| IC1200 | G-10 | D610 | F-7 |
| IC1201 | F-5 | D611 | F-6 |
| | | D612 | E-7 |
| TRANSISTOR | | D613 | F-8 |
| Q501 | H-14 | D614 | F-8 |
| Q502 | H-14 | D615 | H-7 |
| Q503 | H-14 | D616 | G-7 |
| Q601 | C-7 | D617 | F-9 |
| Q602 | G-7 | D618 | F-11 |
| Q603 | H-7 | D619 | E-6 |
| Q604 | G-7 | D620 | E-6 |
| Q605 | F-9 | D622 | E-6 |
| Q606 | H-7 | D625 | G-9 |
| Q607 | D-7 | D626 | G-6 |
| Q800 | F-12 | D631 | F-6 |
| Q801 | E-12 | D800 | F-12 |
| Q802 | A-11 | D801 | G-12 |
| Q803 | E-11 | D802 | G-12 |
| Q805 | F-10 | D803 | F-13 |
| Q900 | G-4 | D807 | E-12 |
| Q1200 | H-10 | D808 | E-14 |
| Q1201 | G-6 | D809 | A-14 |
| Q1202 | G-5 | D810 | A-13 |
| Q1203 | G-5 | D812 | B-11 |
| Q1204 | G-5 | D815 | E-14 |
| DIODE | | D817 | H-11 |
| D500 | H-12 | D901 | C-1 |
| D502 | H-13 | D902 | I-5 |
| D503 | I-14 | D903 | H-4 |
| D504 | H-11 | D904 | H-5 |
| D505 | H-13 | D905 | I-5 |
| D506 | I-14 | D906 | I-5 |
| D507 | H-13 | D1201 | G-6 |


1
2
3
4
5
6
7
8
9
10
11
A
B
C
D
E
F
G
H
I
J
K
L
M
N
O
B-:SSBE3Ð<...>-Ð..-29X1
CN603 4P
AC-IN
NC
NC
AC-IN
AC-IN 240-250V AC
F601 5.0A 250V
S601 POWER
LF600 LFT
LF601 LFT
C683 0.22 300V
C634 0.22 300V
C600 2200p 250V
C635 0.22 300V
R630 8.2M 1W
R631 3.3 10W
R642 3.3 10W
C602 4700p 250V
C601 4700p 250V
R629 1M 1/2W
C636 2200p 250V
JW142 15MM
D600 D4SB60L-F
C603 330 400V
R647 0.1 1/2W :RF
R600 39k 3W
D601 EM1-V1
ÐGC
NC
ÐGC
TO ÐGC
CN601 3P
ÐGC CHK
ÐGC CHK
CN600 2P
THP600
Q601 2SC3852A 7V REG
R634 22
R603 10k 2W
C604 100 50V
D603 MTZJ-6.8B
C605 10 100V
FB600 1.1UH
IC600 STR-S6708 POWER-CONTROL
GND
IN
OUT
FB601 1.1UH
R606 JW 12.5MM
C607 220 25V
R627 0.68 1W
C608 1500p 2kV E
D607 EG-1Z
R607 12 1W :RS
R605 0.27 2W :RS
FB607 1.1UH
D
HV OUT
PIN OUT
POWER SUPPLY
CONTROL SW. AUDIO IN
Y-CHROMA IN
HEADPHONE IN
SIRCS RECEIVE. INDICATOR
CN902 50P
GND
GND
GND
GND
ROT COIL
V-OUT
NC
GND
E/W
V+OUT
H DRIVE
V-SYNC
HFBP
GND
EHT
ABL
PROT
ÐGC RELAY
GND
9V
33V
STBY 5V
AFC
SIRCS
SPKRL
STBY
GND
5V
SPKRR
GND
STBY LED
GND
GND
GND
GND
KEY 1
VM OUT
MUTE
H/P R
GND
H/P L
GND
RIN
LIN
VIN
GND
CIN
YIN
TO A BOARD CN001
-21V
(12)
(13)
L616 47µH
+9V
JW898 5MM
AUDIO L
L615 22µH
+5V
AUDIO R
<EHT>
R833 220k
R522 22k
R523 22k
D504 1SS133T
D505 MTZJ-3.6A
R524 4.7k
Q501 2SC1740S-RT SW
C522 10 50V
D506 1SS133T
D507 MTZJ-5.1B
R525 4.7k
Q502 2SA933S-RT SW
C521 10 25V
Q503 DTC144ES SW
C523 0.1
R526 2.2k
<+SAW>
TP18
R500 33k 1W
IC500 STV9379 VERTICAL OUTPUT
V+I/P
VCC
F.B.-PLS
VEE
OUT-PUT
VCC (OUT)
V-I/P
(7)
(6)
C510 220 50V
C507 2.2 50V
C511 0.33 63V
R505 1.5 :FPRÐ
D803 GP08D
R507 220 2W
C513 0.1 100V :MPS
C503 0.1 :MPS
R521 27k 1W
R527 4.7k 1W
R504 27k 1W
R506 5.6k 1W
C504 470p
C506 470 25V
C509 0.1
R508 1.5 2W :RS
<HDRIVE>
<ROT COIL>
R812 2.2k
R852 18k
FB800
C838 470p 500V
D807 RGP10GPK
R818 22 2W
R842 4.7k
R809 100k
C830 0.47 50V
R843 120k
C802 0.01
<E/W>
R847 470k
R803 3.9k
R805 10k
C801 0.022
R846 180k
C832 1 50V
R848 22k
D808 GP08D
<HFBP>
R800 2.2k
JW009 5MM
R837 6.8k
D802 1SS133T
R849 10k
D817 MTZJ-5.6B
+9V
D801 1SS133T
R802 22k
C800 0.0047
R813 470 1W
R814 330
(8)
C804 0.1
Q801 2SC4793 PIN OUT
C1207 100 16V
L809 47µH
D800 1SS133T
C834 22 25V
(10)
(9)
R850 4.7k
R811 5MM (JW)
Q800 2SC1740S-RT PIN-OUT
CN807 3P S:MICRO
RIGHT
CENTRE
H.CEN
Q1204 DTC143TS MUTE SW
R1204 2.2k
C1214 100 16V
IC1201 TDA2822M HEADPHONE AMP
C1209 4.7 50V
R1206 8.2k
R1205 8.2k
R1203 2.2k
C1208 4.7 50V
C1218 220 16V
R1202 4.7 :FPRÐ
R1217 4.7k
D1202 JW
Q1202 DTC114ES MUTE SW
Q1203 DTC143TS MUTE SW
C831 JW
IC800 LM393P PIN-CORRECTION
JW819
JW820
R835 22 3W
C906 10 50V
C910 JW
R907 75
C908 10 50V
D902 MTZJ-9.1
D903 MTZJ-9.1
D904 MTZJ-9.1
D905 MTZJ-9.1
D906 MTZJ-9.1
R902 39 1/2W
R901 39 1/2W
R922 100
R909 10k
STBY +5V
AUDIO L
AUDIO R
JW306 30MM
C907 10 50V
L904 10µH
C911 10 50V
L903 10µH
C901 100p 500V
R919 47k
R921 47k
C913 100p 500V
R905 75
R906 75
Y/C-3
C902 0.022
L902 10µH
L901 10µH
C903 0.022
J900 HEADPHONES
TP20
R900 220
IC900 SBX1790-51 RECEIVER
R904 4.7
R908 47
C905 10 50V
C904 100 25V
Q900 2SC1740S-RT
R923 390
D901 SLA-570KT3F
R910 2.7k
R911 5.6k
R912 10k
R913 22k
R914 47k
S902
S901
S900
CN900
R
L
V



13
14
15
16
17
18
19
20
21
IC601 TLP721 (D4-) ISOLATOR
R601 1k
R612 8.2k
T601 SRT
+135V
R632 100
C622 0.47 100V
D615 EU-1
IC602 SE135N ERR-AMP
L609 47µH
R602 150k 1%
R616 120k 1% :RN
C625 47 50V
R620 470k 1/2W
R618 22k
Q605 2SC1740S-RT PROTECTION
R638 22k
D625 1SS133T
R623 10k
C628 10 50V
R622 47k
Q606 DTA144ES PROTECTION
R637 220
D617 1SS133T
D626 AU-01Z
R645 2.7k
C647 680p 2kV
TP5
D616 MTZJ-7.5C
R614 22k 1W
R635 47k
D631 MTZJ-6.2B
R611 2.7 1W
R613 1k
Q602 2SA1667 STBY SW
Q603 2SC3502-E STBY SW
Q604 2SC2808STP STBY SW
R615 33k
FB602 1.1UH
R646 0.47 :FPRD
D608 EU2-V1
D609 RU4AM
TP6
C613 100 160V
FB604 .45UH
FB606 1.1UH
C612 22 100V
R610 1k 1%
R608 0.47 2W
FB605 0.45UH
PS603 2.7A
R639 5.6k 1%
TP9
C616 1000 25V
L611 15µH
C611 470p 500V B
D612 RU3YX-LF-C4
C651 470p 500V B
FB608 0.45UH
D611 FML-G12S
C615 1000 25V
L610 5mm
TP12
IC606 LM2940CT-9.0 +9V REG
TP10
C618 0.1
C614 100 25V
PS602 2.7A
D610 AU-01Z
D613 FML-G12S
C617 2200 16V
L613 5.6µH
TP11
IC603 LM2940CT-5.0 +5V REG
TP13
C630 2200 35V
R640 7.5MM
R619 56 1W :RS
PS601 2.7A
R609 5MM
C620 470p 500V B
C624 0.1
C626 220 25V
D614 FML-G12S
L612 5.6µH
C629 2200 35V
PS600 2.7A
C640 0.1 100V :MPS
R641 7.5MM
R621 56 1W :RS
C619 470p 500V B
IC604 L4941BV +5V REG
C621 0.1
C623 220 25V
RY600
D619 1SS133T
Q607 2SC1740S-RT RELAY DRIVE
R628 680
R624 10
R626 12k
C632 220
C631 22 50V
R625 27k
D620 1SS133T
D622 MTZJ-9.1
+21V
TP7
TP8
-21V
21V
STBY5V
5V
9V
STBY +5V
+5V
R633 100
D618 1SS133T
33V
ABL
D809 RGP02-20EG23
+135V
+200V
R830 1k 1W
C821 0.0047 2kV
CN804 6P WHT
1 +1000V
2 +200V
3 GND
4 NC
5 H1
6 H2
TO C BOARD CN701
T803 FBT
HV
+9V
C822 22 250V
D810 RGP10GPKG23
R831 5MM
C824 33 160V
L806 JW
R836 68k
200V
+B
HV TO CRT
TP14
C518 470p 500V B
D502 RGP15GPKG23
R510 0.47 :FPRD
L502 3.3µH LHL08
C517 470 25V
C514 0.1
C515 470 25V
15V
GND
R617 33k 2W
R829 56k 1/2W
TO C BOARD FV
FV
C519 470p 500V B
R509 0.47 :FPRD
D503 RGP15GPKG23
L503 3.3µH LHL08
C520 470 25V
TP15
BF
E
ABL
27V
H2
H1
L813 2.2mH
R826 1k 1/2W
C819 0.068 250V :MPS
R827 4.7k
R828 12k
L810 5MM
CN1401 5P
1 +135V
2 NC
3 GND
4 VM OUT
5 +9V
TO VM BOARD CN1015
CN803 1P
1 GND
TAB (CONTACT)
CN801 10P
1 +15V PULSE
2 GND
3 GND
4 ROT COIL
5 GND
6 FBT +15V
7 GND
8 GND
9 GND
10 V-OUT
TO D2 BOARD CN1801
JW007 5MM
+15V
JW120 10MM
C810 2.2µF 250V
L811 220µH
C812 0.68 400V
R821 47 3W
C808 0.1 400V
L805 4.7mH
C811 820p 500V
L804 HLC
TP16
R840 100
CN800 6P :DY
6 V+
5 V-
4 H-
3 H-
2 H+
1 H+
DY
H.DY
H.DY
V.DY
V.DY
R822 680 1W :RS
C829 0.47 50V
R817 1.2k 3W
R816 1k 3W
Q802 2SC4927-01 H-OUT
C806 0.1 200V
C835 1000p 500V B
R851 10k 2W PFRD
C836 100p 500V B
T804 HDT
L803 1.9mH
R819 0.47 1W :RS
C820 47 B
R820 68
C814 0.015 1.4kV
JW013 5MM
C816 1000p 2kV
C818 470p 2kV
C817 1000p 2kV
R824 1.8k
R841 1.2k
Q803 2SC2688-L H-DRIVE
Q805 DTC144ES SW
JW807 5MM
JW805 5MM
JW808 5MM
JW809 5MM
D812 FMS-3FU
C813 0.047 630V 9PP
C815 8200p 400V
R1218 5MM
D1201 MTZJ-3.9B
+21V
Q1201 DTC143TS MUTE SW
+5V
5V
R1216 470
R1213 2.2k
Q1200 2SC1740S-RT MUTE SW
R1200 4.7k
R1201 27k
C1215 0.47
C1200 0.1
IC1200 TDA7264 AUDIO-AMP
ROUT
-21V
LOUT
-21V
L IN
GND
R IN
C1202 0.47
C1201 0.47
C1216 2200p
C1217 2200p
-21V
R1211 3.9k
R1212 3.9k
CN1420 3P BLK S-MICRO
1 GND
2 GND
3 GND
CN1408 4P :S-MICRO
4 GND
3 L OUT
2 GND
1 R OUT
AUDIO L
AUDIO R
SP L
SP R
R1208 4.7 :RF
R1209 4.7 :RF
C1206 0.022
C1205 0.022
C1203 0.22 :MPS
C1204 0.22 :MPS

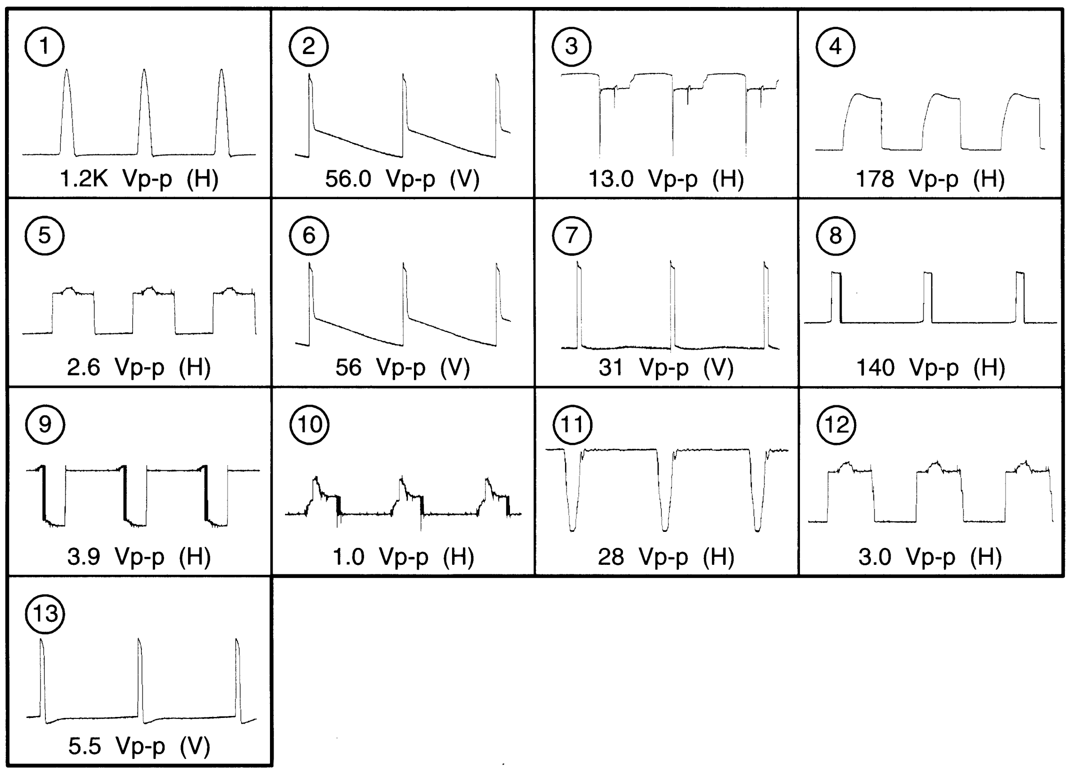
## D BOARD
## TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q501 | -0.1 | 0.2 | - |
| Q502 | 0.1 | -5.8 | - |
| Q503 | -5.8 | -12.0 | -12.0 |
| Q602 | 72.0 | 7.5 | 72.7 |
| Q603 | 0 | 72.0 | - |
| Q604 | 0.7 | - | - |
| Q605 | 0.5 | - | 0.3 |
| Q606 | - | - | 12.0 |
| Q607 | - | 12.0 | - |
| Q800 | 0.2 | 3.1 | - |
| Q801 | 0.3 | 17.0 | - |
| Q802 | -0.2 | 143.3 | - |
| Q803 | -0.6 | 99.8 | - |
| Q805 | - | 3.6 | - |
| Q900 | - | 5.4 | - |
| Q1200 | 2.9 | 21.5 | 4.6 |
| Q1201 | 3.4 | 5.0 | 3.0 |
| Q1202 | 2.8 | - | - |

## D BOARD IC VOLTAGE TABLE

| IC Voltage Table | | |
|---|---|---|
| Ref No | Pin No | Voltage (V) |
| IC500 | 1 | 1.5 |
| | 2 | 15.0 |
| | 3 | -12.3 |
| | 4 | -14.0 |
| | 5 | 0.1 |
| | 6 | 15.2 |
| | 7 | 1.4 |
| IC600 | 1 | 170.0 |
| | 2 | -62.4 |
| | 3 | -62.6 |
| | 4 | -62.2 |
| | 5 | -62.0 |
| | 6 | -62.6 |
| | 7 | -62.4 |
| | 8 | -62.0 |
| | 9 | -58.0 |
| IC601 | 1 | 64.3 |
| | 2 | 63.0 |
| | 3 | -62.5 |
| | 4 | -58.6 |
| IC602 | 1 | 135.0 |
| | 2 | 63.2 |
| | 3 | -0.1 |
| IC800 | 3 | 0.9 |
| | 5 | 1.5 |
| | 6 | 2.0 |
| | 7 | 0.2 |
| | 8 | 9.0 |
| IC1200 | 2 | 21.7 |
| | 4 | 21.5 |
| | 5 | -21.7 |
| IC1201 | 1 | 4.0 |
| | 2 | 9.0 |
| | 3 | 4.0 |
| | 5 | 0.5 |
| | 8 | 0.5 |

## WAVEFORMS D BOARD

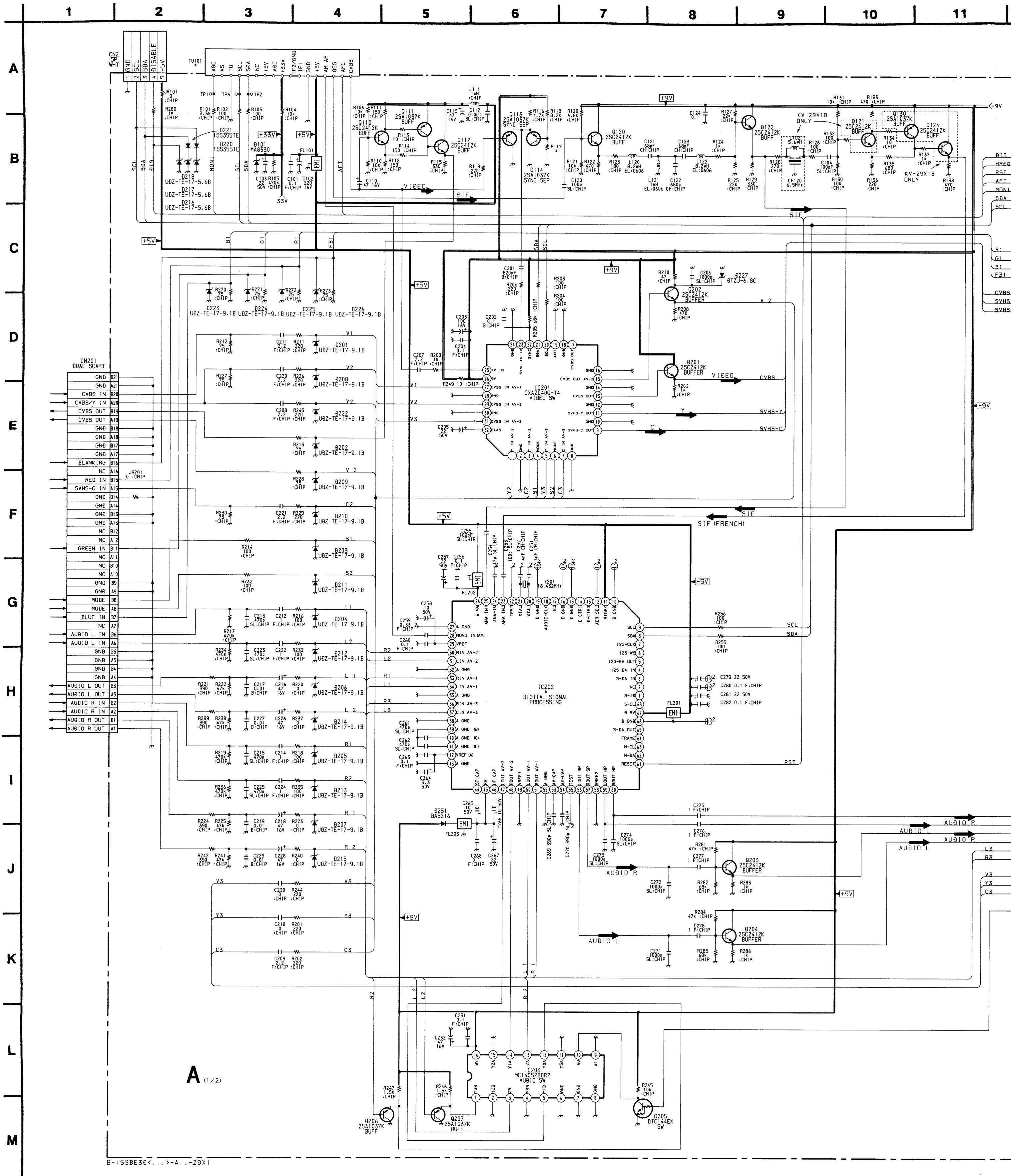


## D BOARD
## TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q501 | -0.1 | 0.2 | - |
| Q502 | 0.1 | -5.8 | - |
| Q503 | -5.8 | -12.0 | -12.0 |
| Q602 | 72.0 | 7.5 | 72.7 |
| Q603 | 0 | 72.0 | - |
| Q604 | 0.7 | - | - |
| Q605 | 0.5 | - | 0.3 |
| Q606 | - | - | 12.0 |
| Q607 | - | 12.0 | - |
| Q800 | 0.2 | 3.1 | - |
| Q801 | 0.3 | 17.0 | - |
| Q802 | -0.2 | 143.3 | - |
| Q803 | -0.6 | 99.8 | - |
| Q805 | - | 3.6 | - |
| Q900 | - | 5.4 | - |
| Q1200 | 2.9 | 21.5 | 4.6 |
| Q1201 | 3.4 | 5.0 | 3.0 |
| Q1202 | 2.8 | - | - |

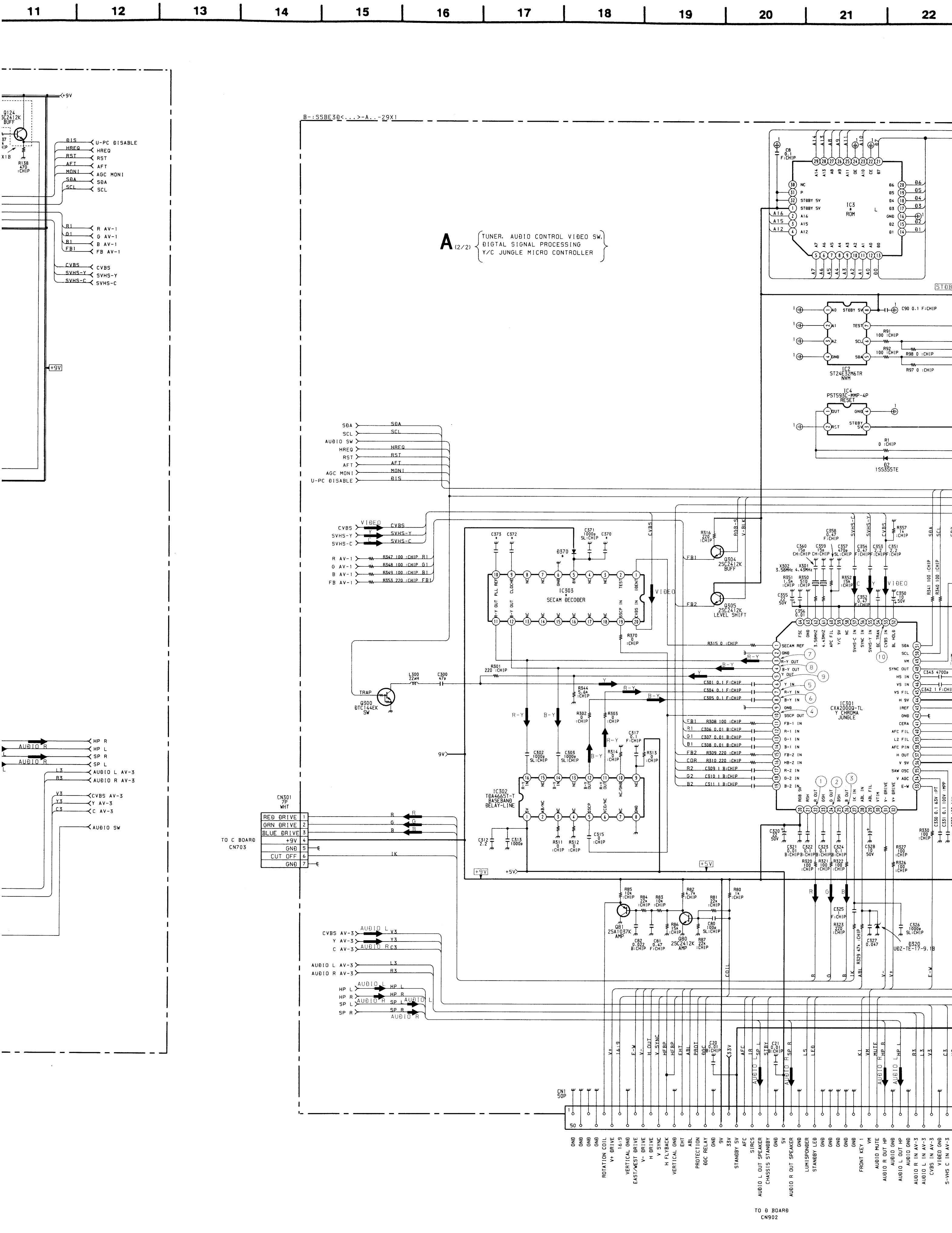
## D BOARD IC VOLTAGE TABLE

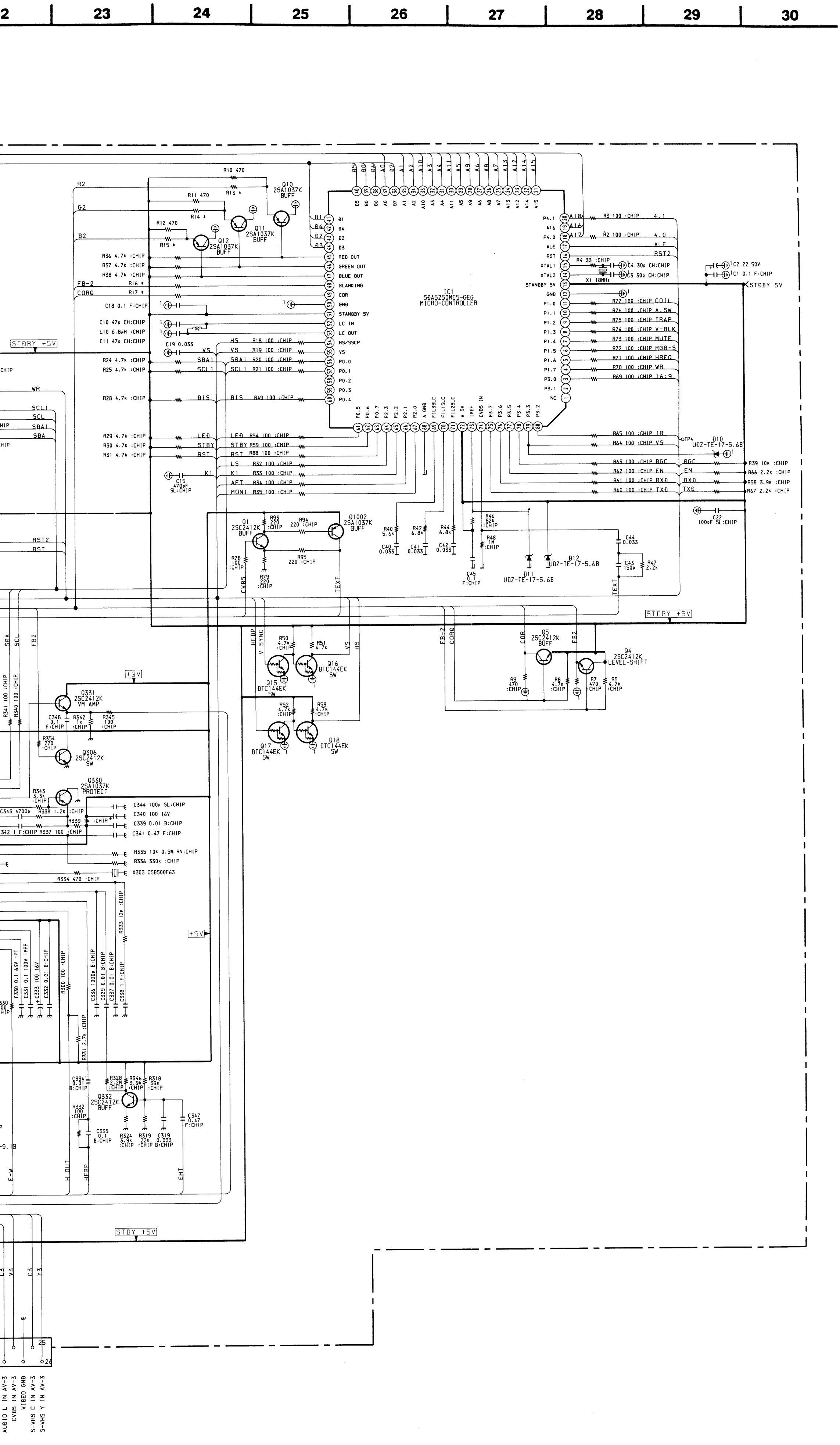
| IC Voltage Table | | |
|---|---|---|
| Ref No | Pin No | Voltage (V) |
| IC500 | 1 | 1.5 |
| | 2 | 15.0 |
| | 3 | -12.3 |
| | 4 | -14.0 |
| | 5 | 0.1 |
| | 6 | 15.2 |
| | 7 | 1.4 |
| IC600 | 1 | 170.0 |
| | 2 | -62.4 |
| | 3 | -62.6 |
| | 4 | -62.2 |
| | 5 | -62.0 |
| | 6 | -62.6 |
| | 7 | -62.4 |
| | 8 | -62.0 |
| | 9 | -58.0 |
| IC601 | 1 | 64.3 |
| | 2 | 63.0 |
| | 3 | -62.5 |
| | 4 | -58.6 |
| IC602 | 1 | 135.0 |
| | 2 | 63.2 |
| | 3 | -0.1 |
| IC800 | 3 | 0.9 |
| | 5 | 1.5 |
| | 6 | 2.0 |
| | 7 | 0.2 |
| | 8 | 9.0 |
| IC1200 | 2 | 21.7 |
| | 4 | 21.5 |
| | 5 | -21.7 |
| IC1201 | 1 | 4.0 |
| | 2 | 9.0 |
| | 3 | 4.0 |
| | 5 | 0.5 |
| | 8 | 0.5 |


A (1/2)
CN2 5P WHT
TU101
CN201 DUAL SCART
IC201 CXA2040Q-T4 VIDEO SW
IC202 DIGITAL SIGNAL PROCESSING
IC203 MC14052BBR2 AUDIO SW
X201 18.432MHz
Q110 2SC2412K BUFF
Q111 2SA1037K BUFF
Q112 2SC2412K BUFF
Q113 2SA1037K SYNC SEP
Q114 2SA1037K SYNC SEP
Q120 2SC2412K BUFF
Q121 2SC2412K BUFF
Q122 2SC2412K BUFF
Q124 2SC2412K BUFF
Q130 2SA1037K BUFF
Q201 2SC2412K BUFFER
Q202 2SC2412K BUFFER
Q203 2SC2412K BUFFER
Q204 2SC2412K BUFFER
Q205 DTC144EK SW
Q206 2SA1037K BUFF
Q207 2SA1037K BUFF
KV-29X1B ONLY
CF120 6.5MHz
SIF
SIF (FRENCH)
VIDEO
AUDIO R
AUDIO L
CVBS
SVHS-Y
SVHS-C
B-:SSBE3Ø<...>-A..-29X1

## A BOARD * MARK

| Model / Ref. No. | 29X1A | 29X1B | 29X1D | 29X1E | 29X1K | 29X1L | 29X1R | 29X1U |
|---|---|---|---|---|---|---|---|---|
| C370 | — | 2.2UF | 2.2UF | 2.2UF | 2.2UF | — | 2.2UF | — |
| C372 | — | 0.1UF | 0.1UF | 0.1UF | 0.1UF | — | 0.1UF | — |
| C373 | — | 0.22UF | 0.22UF | 0.22UF | 0.22UF | — | 0.22UF | — |
| D370 | — | BAS216 | BAS216 | BAS216 | BAS216 | — | BAS216 | — |
| IC3 | TMS27PC010A-15FMBE101 | TMS27PC010A-15FMBE101 | TMS27PC010A-15FMBE101 | TMS27PC010A-15FMBW101 | TMS27PC010A-15FMBE101 | TMS27PC010A-15FMBW101 | TMS27PC010A-15FML | TMS27PC010A-15FMBW101 |
| IC202 | MSP3400C-PS | MSP3410-15 | MSP3400C-PS | MSP3410-15 | MSP3400C-PS | MSP3410-15 | MSP3400C-PS | MSP3410-15 |
| IC303 | — | TDA8395T | TDA8395T | TDA8395T | TDA8395T | — | TDA8395T | — |
| R13 | 150 | — | 150 | 150 | 150 | 150 | 150 | 150 |
| R14 | 150 | — | 150 | 150 | 150 | 150 | 150 | 150 |
| R15 | 150 | — | 150 | 150 | 150 | 150 | 150 | 150 |
| R16 | 100 | — | 100 | 100 | 100 | 100 | 100 | 100 |
| R17 | 100 | — | 100 | 100 | 100 | 100 | 100 | 100 |
| R117 | 1.8K | 1.8K | 1.8K | 1.8K | 1.8K | 1.8K | 1.8K | 2.0K |
| TU101 | TUVIF (AEP) | TUVIF (FR) | TUVIF (AEP) | TUVIF (AEP) | TUVIF (AEP) | TUVIF (AEP) | TUVIF (AEP) | TUVIF (UK) |

 
11
12
13
14
15
16
17
18
19
20
21
22
A (2/2)
TUNER, AUDIO CONTROL VIDEO SW,
DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER
B-:SSBE30<...>-A..-29X1
+9V
Q124
2SC2412K
BUFF
R138
470
:CHIP
U-PC DISABLE
HREQ
RST
AFT
AGC MONI
SDA
SCL
R AV-1
G AV-1
B AV-1
FB AV-1
CVBS
SVHS-Y
SVHS-C
HP R
HP L
SP R
SP L
AUDIO L AV-3
AUDIO R AV-3
CVBS AV-3
Y AV-3
C AV-3
AUDIO SW
AUDIO R
IC3
ROM
C8
0.1
F:CHIP
STBY 5V
IC2
ST24E32M6TR
NVM
C90 0.1 F:CHIP
R91
100 :CHIP
R92
100 :CHIP
R98 0 :CHIP
R97 0 :CHIP
IC4
PST593C-MMP-4P
RESET
R1
0 :CHIP
D2
1SS355TE
IC303
SECAM DECODER
D370
C373
C372
C371
1000p
SL:CHIP
C370
R347 100 :CHIP R1
R348 100 :CHIP G1
R349 100 :CHIP B1
R353 220 :CHIP FB1
VIDEO
R370
0
:CHIP
Q300
DTC144EK
SW
TRAP
L300
22µH
C300
47p
R301
220 :CHIP
R344
5.6k
:CHIP
R302
0
:CHIP
R303
0
:CHIP
C317
0.1
F:CHIP
R314
0
:CHIP
R313
0
:CHIP
IC302
TDA4665T-T
BASEBAND
DELAY-LINE
C302
1000p
SL:CHIP
C303
1000p
SL:CHIP
C312
2.2
C313
1000p
R311
0
:CHIP
R312
0
:CHIP
C315
:CHIP
R-Y
B-Y
CN301
7P
WHT
RED DRIVE
GRN DRIVE
BLUE DRIVE
+9V
GND
CUT OFF
GND
TO C BOARD
CN703
IK
9V
+5V
R316
220
:CHIP
Q304
2SC2412K
BUFF
Q305
2SC2412K
LEVEL SHIFT
RGB-S
V-BLK
FB1
FB2
X302
3.58MHz
X301
4.43MHz
IC301
CXA2000Q-TL
Y CHROMA
JUNGLE
R315 0 :CHIP
C301 0.1 F:CHIP
C304 0.1 F:CHIP
C305 0.1 F:CHIP
R308 100 :CHIP
C306 0.01 B:CHIP
C307 0.01 B:CHIP
C308 0.01 B:CHIP
R309 220 :CHIP
R310 220 :CHIP
C309 1 B:CHIP
C310 1 B:CHIP
C311 1 B:CHIP
C343 4700p
C342 1 F:CHIP
R357
1k
:CHIP
R341 100 :CHIP
R340 100 :CHIP
C350
10
50V
C330 0.1 63V :PT
C331 0.1 100V :MPP
R330
100
:CHIP
R327
100
:CHIP
R326
100
:CHIP
C320
22
50V
C328
10
50V
C325
1
F:CHIP
R323
220
:CHIP
R329 47k :CHIP
C327
0.047
C326
1000p
SL:CHIP
D320
UDZ-TE-17-9.1B
R85
10k
:CHIP
R84
22k
:CHIP
R83
10k
:CHIP
R82
4.7k
:CHIP
R81
22k
:CHIP
R80
1k
:CHIP
Q81
2SA1037K
AMP
Q80
2SC2412K
AMP
C82
0.022
B:CHIP
C81
0.47
F:CHIP
R86
15k
:CHIP
C80
100p
SL:CHIP
R87
22k
:CHIP
COIL
C20
0.01
B:CHIP
C21
0.01
B:CHIP
CN1
50P
GND
ROTATION COIL
V+ DRIVE
16:9
VERTICAL GND
EAST/WEST DRIVE
V- DRIVE
H DRIVE
V SYNC
H FLYBACK
VERTICAL EHT
ABL
PROTECTION
DGC RELAY
GND
9V
33V
STANDBY 5V
AFC
SIRCS
AUDIO L OUT SPEAKER
CHASSIS STANDBY
5V
AUDIO R OUT SPEAKER
LUMISPONDER
STANDBY LED
FRONT KEY 1
VM
AUDIO MUTE
AUDIO R OUT HP
AUDIO GND
AUDIO L OUT HP
AUDIO R IN AV-3
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS-C IN AV-3
TO D BOARD
CN902



2
23
24
25
26
27
28
29
30
IC1
SDA5250MC5-GEG
MICRO-CONTROLLER
Q10 2SA1037K BUFF
Q11 2SA1037K BUFF
Q12 2SA1037K BUFF
Q1 2SC2412K BUFF
Q1002 2SA1037K BUFF
Q5 2SC2412K BUFF
Q4 2SC2412K LEVEL-SHIFT
Q15 DTC144EK SW
Q16 DTC144EK SW
Q17 DTC144EK SW
Q18 DTC144EK SW
Q331 2SC2412K VM AMP
Q306 2SC2412K SW
Q330 2SA1037K PROTECT
Q332 2SC2412K BUFF
D10 UDZ-TE-17-5.6B
D11 UDZ-TE-17-5.6B
D12 UDZ-TE-17-5.6B
X1 18MHz
X303 CSB500F63
STBY +5V
STBY 5V
+9V
RED OUT
GREEN OUT
BLUE OUT
BLANKING
STANDBY 5V
AUDIO L IN AV-3
CVBS IN AV-3
VIDEO GND
S-VHS C IN AV-3
S-VHS Y IN AV-3

## A (1/2) BOARD IC VOLTAGE TABLE

| IC Voltage Table | | |
|---|---|---|
| Ref No | Pin No | Voltage (V) |
| IC201 | 13 | 4.4 |
| | 15 | 4.4 |
| | 20 | 3.5 |
| | 21 | 2.7 |
| | 22 | 4.9 |
| | 23 | 4.4 |
| | 24 | 0 |
| | 25 | 4.4 |
| | 26 | 8.8 |
| | 32 | 4.4 |
| IC202 | 4 | 2.8 |
| | 6-7 | 0.1 |
| | 8 | 3.0 |
| | 9 | 3.6 |
| | 11 | 4.7 |
| | 13 | 4.7 |
| | 20-21 | 2.4 |
| | 23 | 0.2 |
| | 25 | 1.5 |
| | 26 | 4.8 |
| | 28 | 3.8 |
| | 29 | 2.6 |
| | 39-42 | 3.8 |
| | 44 | 7.1 |
| | 45 | 8.0 |
| | 46 | 7.1 |
| | 47-48 | 3.8 |
| | 53-54 | 3.8 |

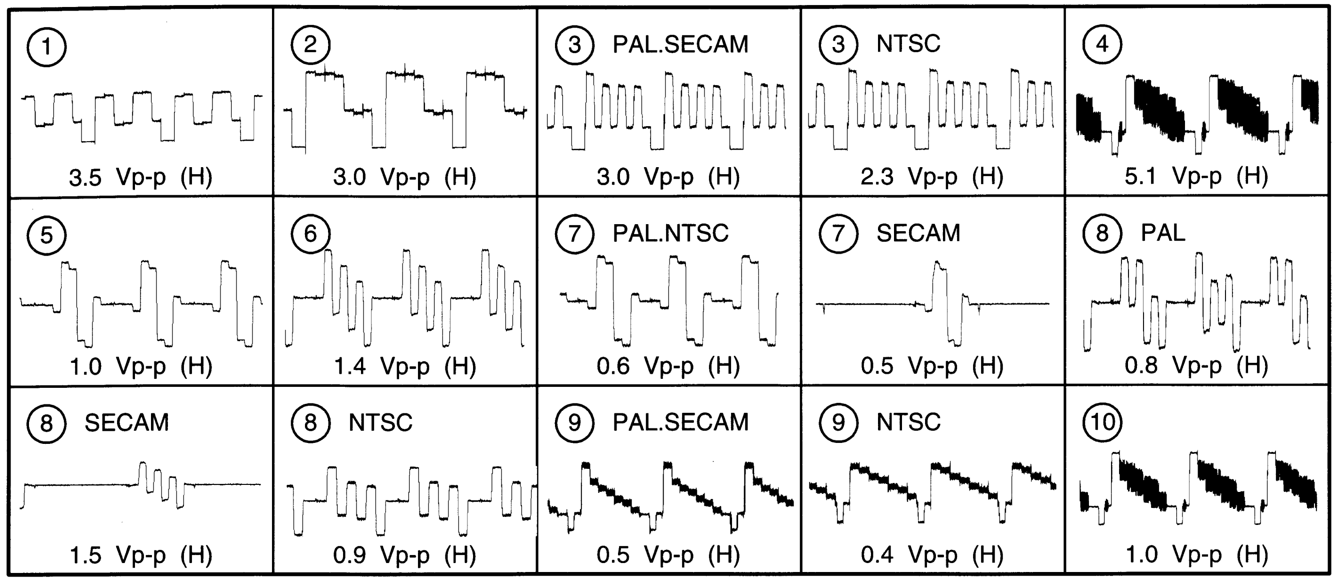
## A (2/2) BOARD TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q1 | 3.7 | 4.8 | 3.1 |
| Q4 | 0.1 | 4.8 | - |
| Q5 | 0.7 | 4.8 | 4.0 |
| Q15 | - | 4.3 | - |
| Q16 | 4.3 | 0.2 | - |
| Q17 | 0.4 | 3.5 | - |
| Q18 | 3.5 | 0.7 | - |
| Q80 | 2.6 | 2.2 | - |
| Q81 | 2.4 | - | 3.0 |
| Q304 | - | 4.8 | - |
| Q305 | - | 4.8 | - |
| Q330 | 4.5 | - | 5.1 |
| Q331 | 6.3 | 8.8 | 5.7 |
| Q332 | 3.1 | 8.8 | 2.5 |
| Q1001 | 4.4 | - | - |

## A (1/2) BOARD TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q110 | 1.8 | 8.2 | 1.2 |
| Q112 | 1.5 | 8.8 | 0.8 |
| Q113 | 1.8 | - | - |
| Q114 | 5.4 | 6.0 | - |
| Q120 | 84.3 | 8.8 | 3.7 |
| Q121 | 1.5 | 5.4 | 0.9 |
| Q122 | 5.4 | 8.8 | 4.7 |
| Q124 | - | 8.8 | - |
| Q201 | 4.4 | 8.8 | 3.7 |
| Q202 | 4.4 | 8.8 | 3.7 |

## WAVEFORMS A BOARD

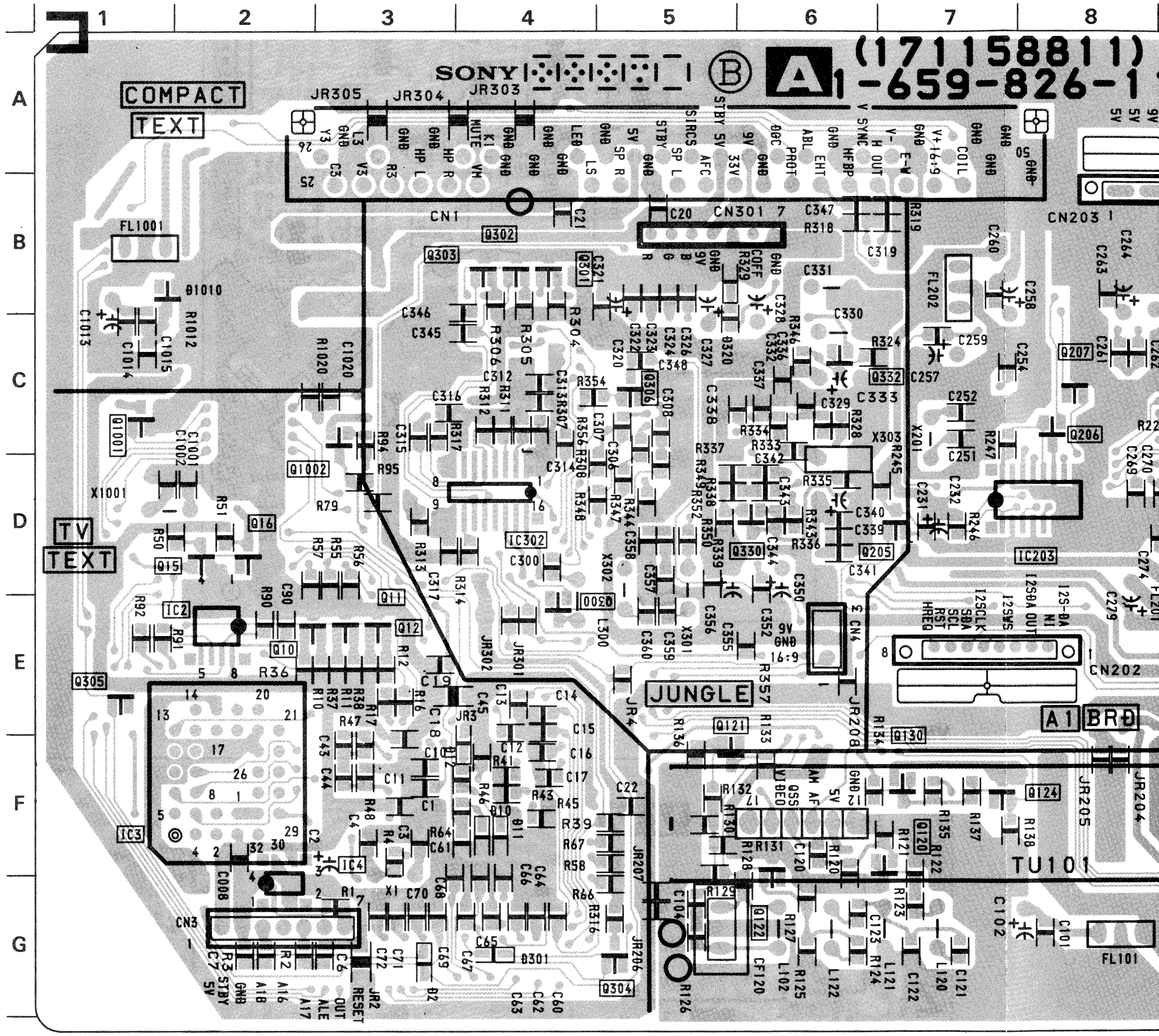


### A (2/2) BOARD IC VOLTAGE TABLE

| IC Voltage Table | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Ref No | Pin No | Voltage (V) | Ref No | Pin No | Voltage (V) | Ref No | Pin No | Voltage (V) |
| IC1 | 2 | 3.6 | IC301 | 5 | 3.6 | IC301 | 61 | 5.0 |
| | 3-4 | 4.8 | | 6 | 5.0 | | 62 | 7.6 |
| | 5 | 0.5 | | 7-8 | 5.4 | IC302 | 1 | 4.8 |
| | 7 | 4.8 | | 10 | 0.6 | | 5 | 0.7 |
| | 9 | 4.8 | | 12-14 | 5.4 | | 9 | 4.8 |
| | 11 | 2.4 | | 16 | 4.0 | | 11-12 | 3.0 |
| | 13 | 4.8 | | 17-19 | 5.4 | | 14 | 1.3 |
| | 14-15 | 2.3 | | 20 | 8.8 | | 16 | 1.3 |
| | 16-17 | 4.8 | | 22-23 | 2.2 | IC303 | 5 | 8.0 |
| | 48 | 4.0 | | 24 | 2.0 | | 3.2 | 10 |
| | 51 | 4.8 | | 25 | 2.4 | | 11 | 5.6 |
| | 52-53 | 2.4 | | 26 | 2.0 | | 0 | 19 |
| | 54 | 0.7 | | 27 | 4.0 | | 20 | 3.7 |
| | 55 | 0.2 | | 28 | 6.6 | | 4 | 0.2 |
| | 56-57 | 4.8 | | 29 | 8.8 | | 5 | 0.7 |
| | 58 | 2.8 | | 31-33 | 3.0 | IC1001 | 4 | 0.2 |
| | 59 | 3.5 | | 34 | 4.0 | | 5 | 0.7 |
| | 60 | 2.4 | | 35 | 4.6 | | 6 | 1.7 |
| | 62 | 0.7 | | 36 | 8.8 | | 7 | 1.8 |
| | 63 | 4.4 | | 37 | 3.1 | | 10 | 0.4 |
| | 65 | 4.8 | | 38 | 3.4 | | 11-12 | 4.8 |
| | 66 | 2.1 | | 39 | 5.3 | | 16 | 4.8 |
| | 67 | 2.0 | | 40 | 4.2 | | 17 | 0 |
| | 69-71 | 2.3 | | 41 | 2.3 | | 21 | 4.8 |
| | 72 | 4.8 | | 43 | 1.7 | | 23 | 3.0 |
| | 73 | 1.5 | | 44 | 8.8 | | 25 | 4.8 |
| | 74 | 1.2 | | 45 | 2.5 | | 56 | 0 |
| | 75-77 | 4.8 | | 46 | 3.9 | | 61 | 1.3 |
| | 79 | 0.2 | | 47 | 3.0 | | 62-63 | 1.4 |
| | 80 | 4.8 | | 48 | 4.4 | | 64 | 0 |
| IC2 | 5-8 | 4.8 | | 49 | 6.3 | | 66 | 4.6 |
| IC3 | 1 | 4.8 | | 50-51 | 0.1 | | 67 | 4.7 |
| | 31-32 | 4.8 | | 53 | 3.9 | | 68 | 4.0 |
| IC4 | 1 | 4.8 | | 54 | 5.0 | | | |
| | 3 | 4.8 | | 55-56 | 4.2 | | | |
| IC301 | 1 | 1.5 | | 58-59 | 8.8 | | | |
| | 3-4 | 5.6 | | 60 | 5.3 | | | |

**A** [ TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER ]

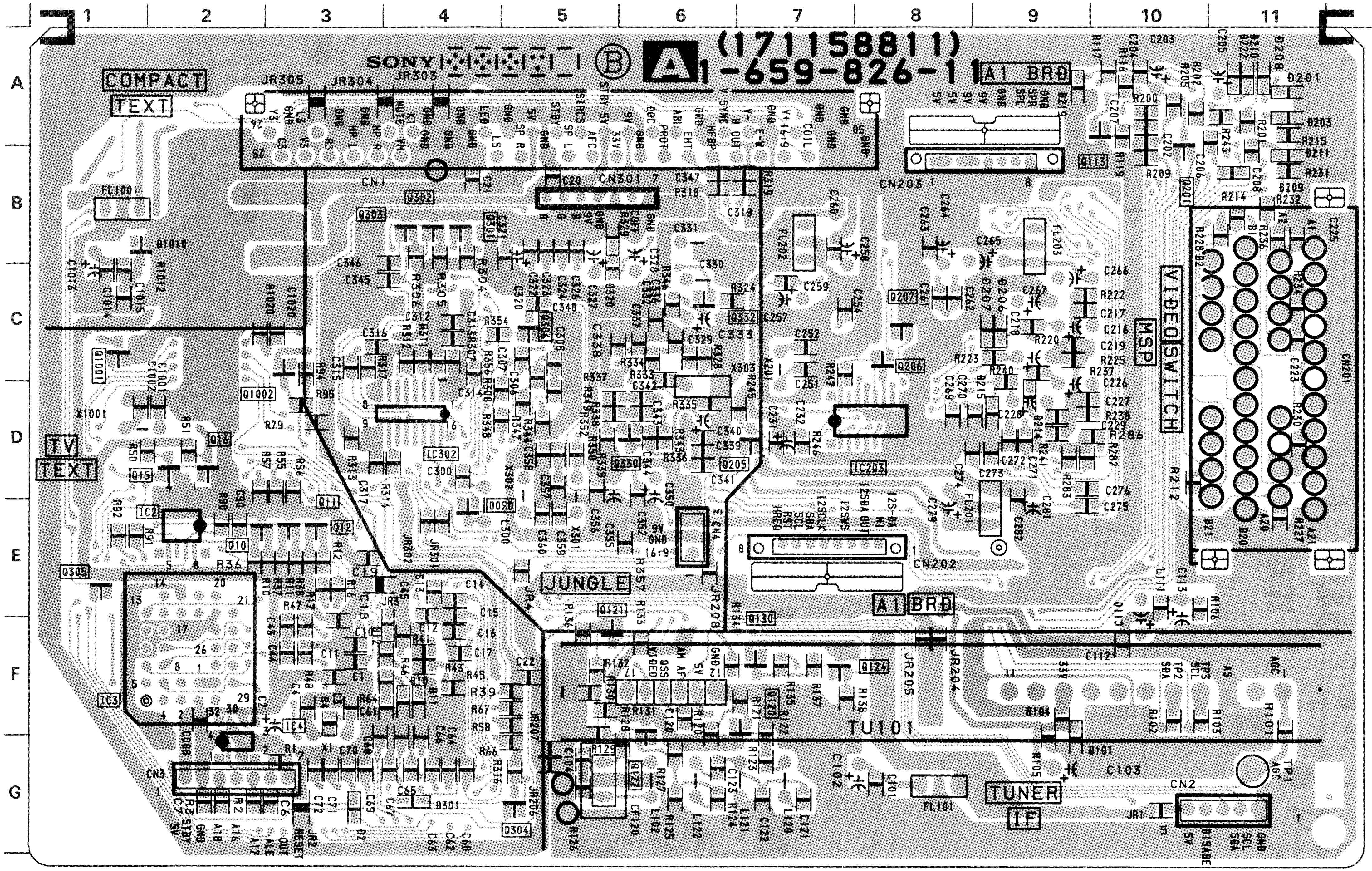
### A Board <Conductor Side>



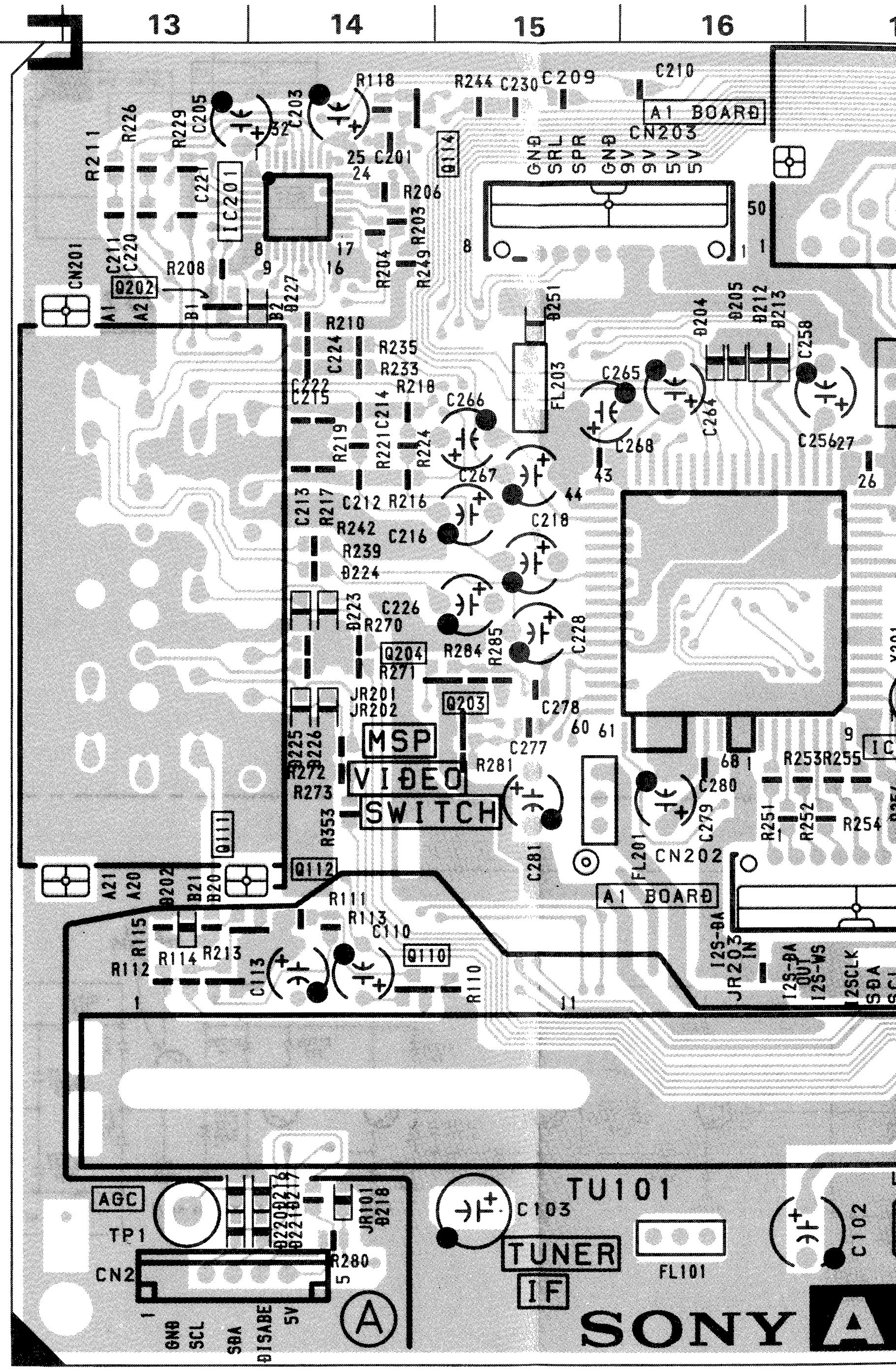
1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
SONY
(1711588 1)
A 1-659-826-1
COMPACT
TEXT
TV
TEXT
JUNGLE
A1 BRD
TU101
CN1
CN301
CN202
CN203
CN3
CN4
FL1001
FL101
FL202
IC2
IC3
IC4
IC203
IC302
JR305
JR304
JR303
X1001
X301
X302
X303

**A** [ TUNER, AUDIO CONTROL VIDEO SW, DIGITAL SIGNAL PROCESSING
Y/C JUNGLE MICRO CONTROLLER ]

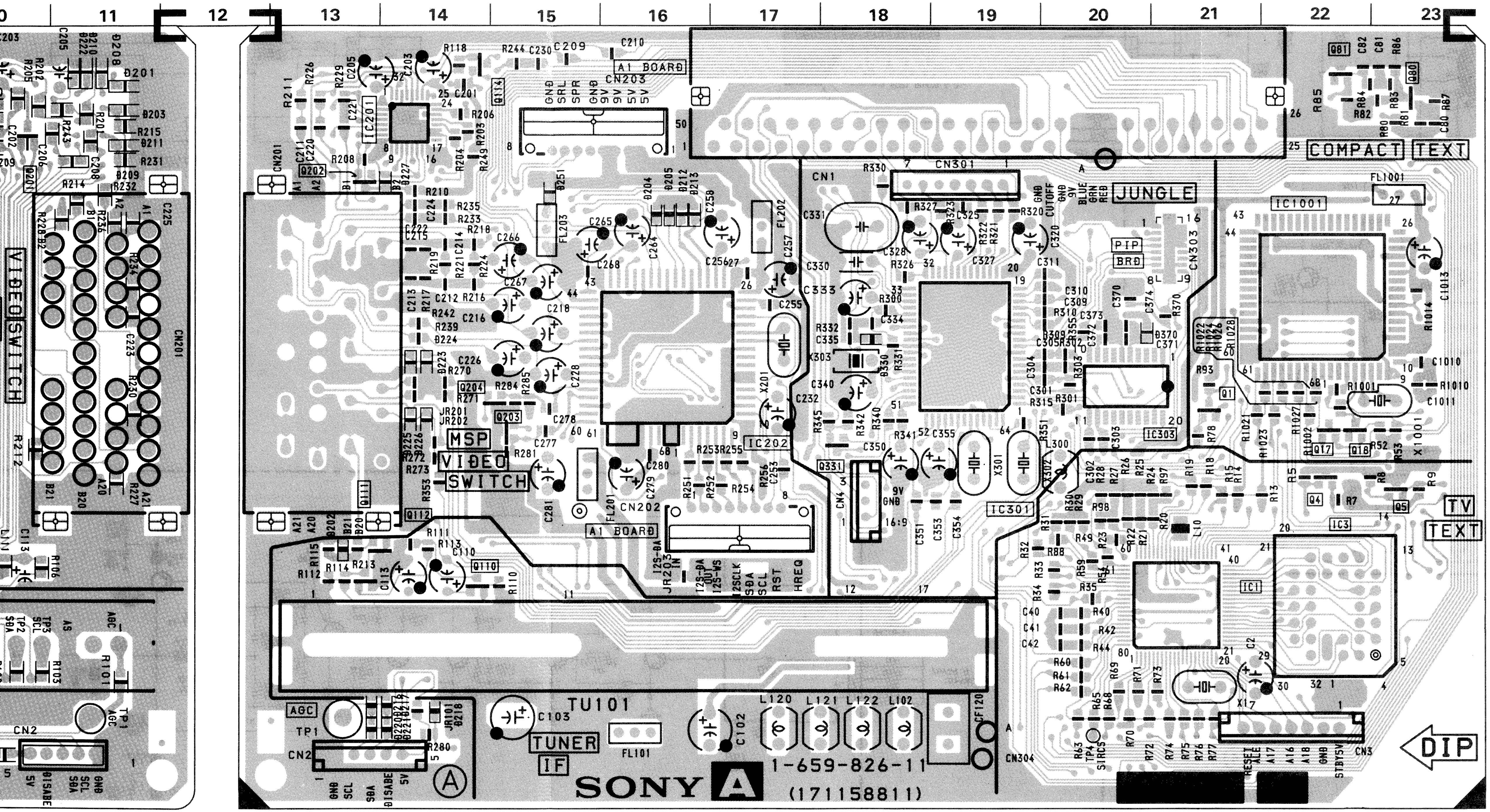
**A Board <Conductor Side>**


1
2
3
4
5
6
7
8
9
10
11
12
A
B
C
D
E
F
G
SONY
(171158811)
A
1-659-826-11
A1 BRD
COMPACT TEXT
TV TEXT
CN1
CN301
CN203
CN202
CN201
CN2
CN3
CN4
JUNGLE
MSP
VIDEO SWITCH
TU101
TUNER IF
IC2
IC3
IC4
IC203
IC302
FL1001
FL101
FL201
FL202
FL203
X1001
X1
TP1 AGC

**A Board <Component Side>**


12
13
14
15
16
A1 BOARD
CN203
CN201
CN202
IC201
MSP
VIDEO SWITCH
TU101
TUNER IF
AGC
TP1
CN2
FL101
FL201
FL203
SONY
A

## A Board <Component Side>

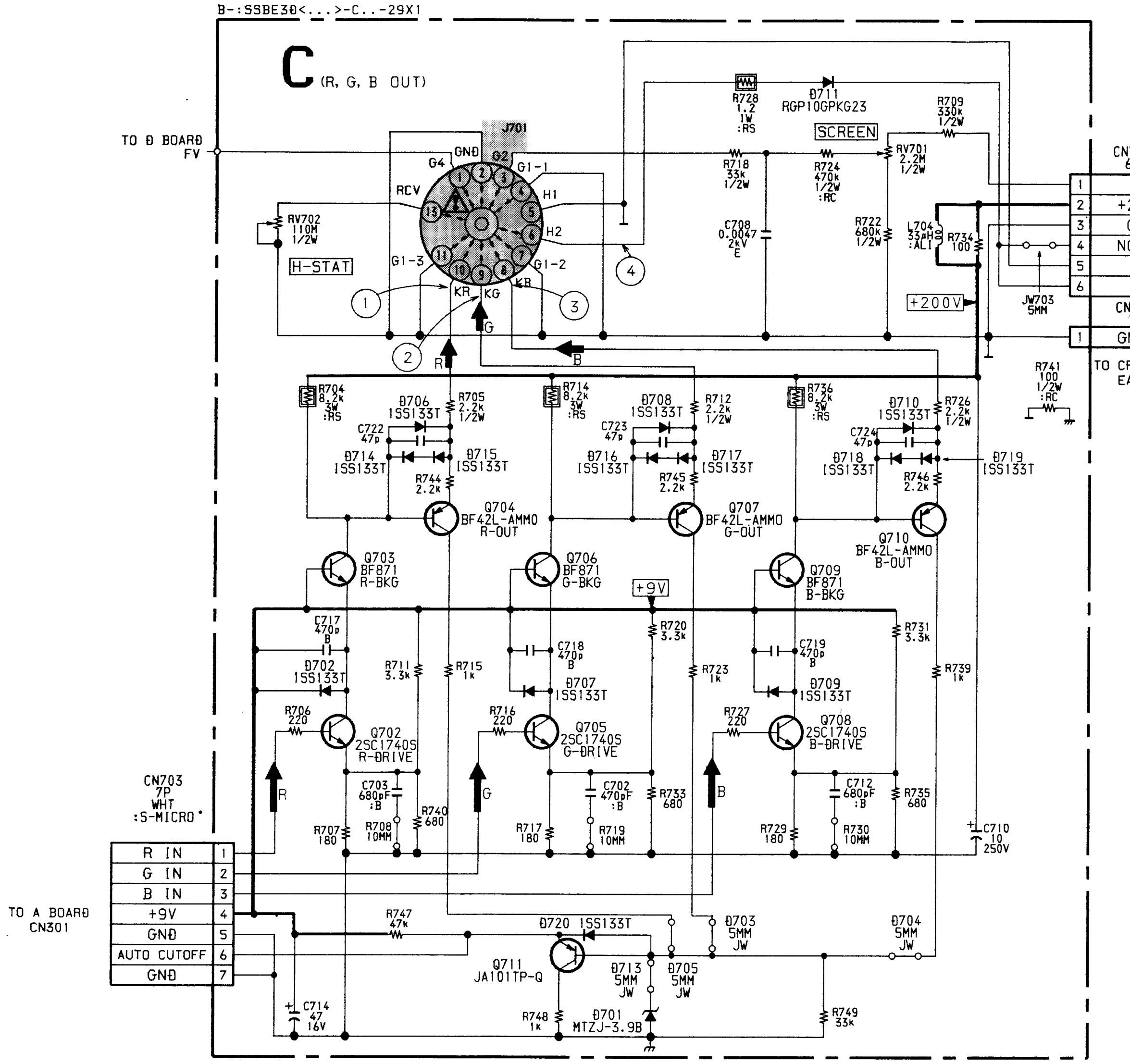

11
12
13
14
15
16
17
18
19
20
21
22
23
A1 BOARD
CN203
CN301
JUNGLE
COMPACT TEXT
PIP BRD
VIDEO SWITCH
MSP
VIDEO SWITCH
IC201
IC202
IC301
IC303
IC1001
IC1
IC3
CN1
CN2
CN3
CN4
CN201
CN202
CN303
CN304
TV TEXT
DIP
TU101
TUNER IF
SONY A
1-659-826-11
(171158811)

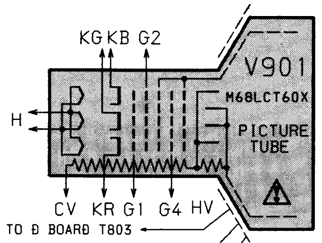
## A BOARD

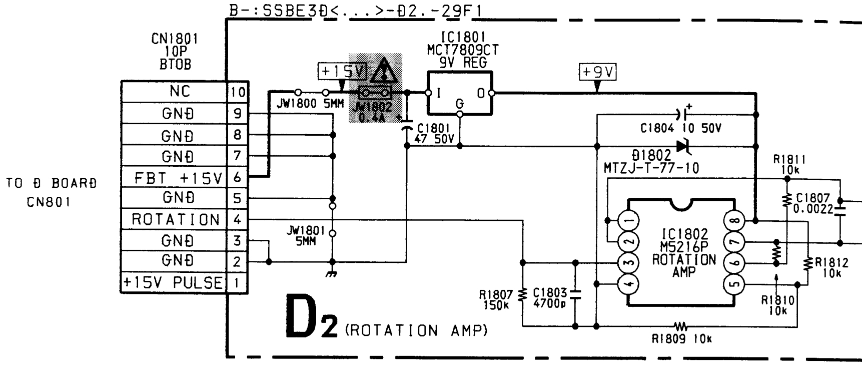
| IC | |
|---|---|
| IC1 | F-21 |
| IC2 | E-2 |
| IC3 | F-2 |
| IC4 | G-2 |
| IC201 | A-14 |
| IC202 | C-16 |
| IC203 | D-8 |
| IC301 | C-19 |
| IC302 | D-4 |
| IC303 | D-21 |

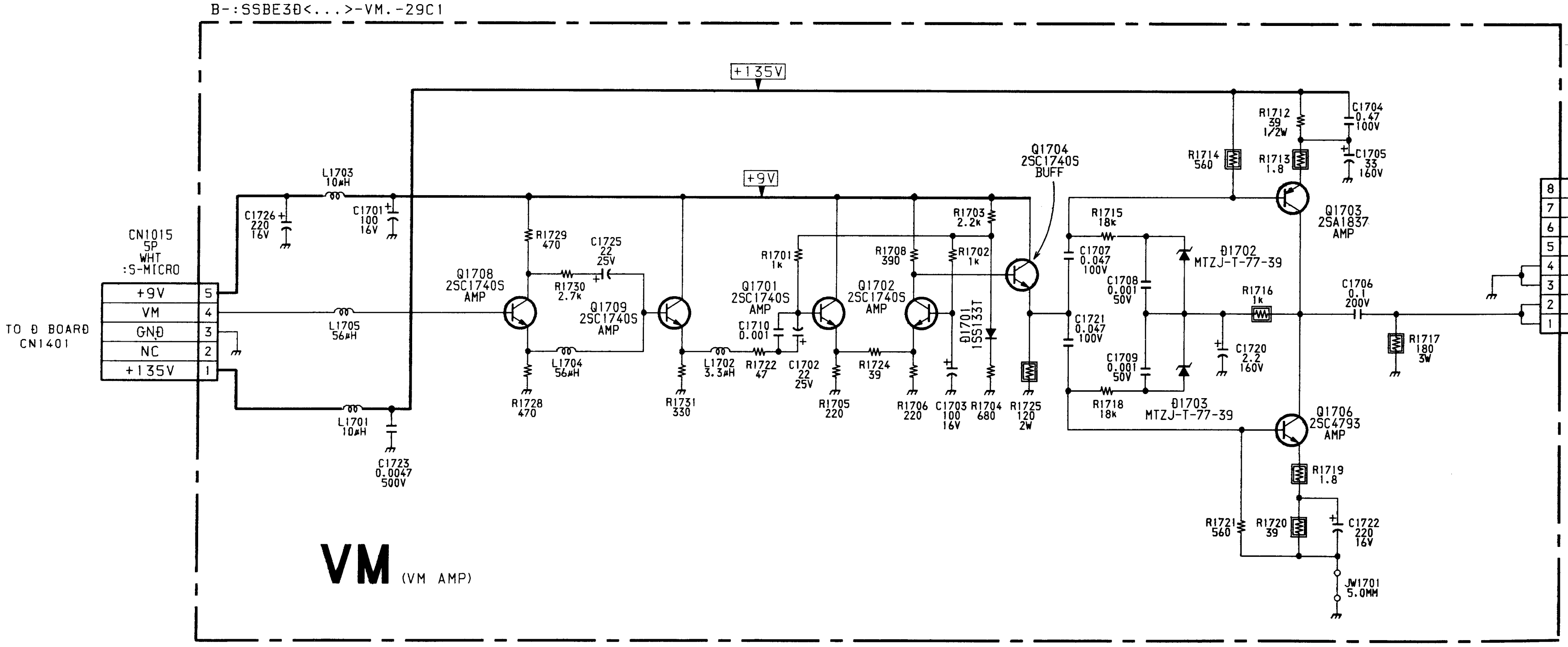
| TRANSISTOR | |
|---|---|
| Q1 | D-21 |
| Q4 | E-22 |
| Q5 | E-23 |
| Q10 | E-2 |
| Q11 | E-3 |
| Q15 | D-2 |
| Q16 | D-2 |
| Q17 | D-22 |
| Q18 | D-23 |
| Q80 | A-23 |
| Q81 | A-22 |
| Q110 | F-14 |
| Q111 | E-14 |
| Q112 | E-14 |
| Q113 | A-10 |
| Q114 | A-14 |
| Q120 | F-7 |
| Q121 | F-5 |
| Q122 | F-6 |
| Q124 | F-7 |
| Q130 | F-7 |
| Q201 | B-10 |
| Q202 | B-13 |
| Q203 | D-15 |
| Q204 | D-15 |
| Q205 | D-7 |
| Q206 | C-8 |
| Q207 | C-8 |
| Q300 | E-4 |
| Q304 | G-5 |
| Q305 | E-1 |
| Q306 | C-5 |
| Q330 | D-6 |
| Q331 | D-18 |
| Q332 | C-6 |
| Q1002 | C-3 |

| DIODE | |
|---|---|
| D2 | G-3 |
| D10 | F-10 |
| D11 | F-10 |
| D12 | F-4 |
| D101 | F-9 |
| D201 | A-11 |
| D202 | E-13 |
| D203 | A-11 |
| D204 | B-16 |
| D205 | B-16 |
| D206 | C-9 |
| D207 | C-9 |
| D208 | A-11 |
| D209 | B-11 |
| D210 | A-11 |
| D211 | B-11 |
| D212 | B-16 |
| D213 | B-16 |
| D214 | D-9 |
| D215 | D-9 |
| D216 | G-14 |
| D217 | G-14 |
| D218 | G-14 |
| D220 | G-14 |
| D221 | D-14 |
| D222 | D-14 |
| D223 | D-14 |
| D224 | D-14 |
| D225 | D-14 |
| D226 | D-14 |
| D227 | B14 |
| D251 | B-15 |
| D320 | C-5 |
| D370 | C-21 |

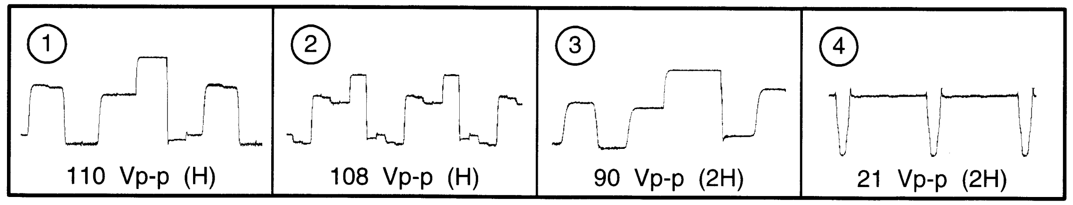

B-:SSBE3D<...>-C..-29X1
C (R, G, B OUT)
TO D BOARD FV
J701
G4
GND
G2
G1-1
H1
H2
G1-2
G1-3
RCV
KR
KG
KB
RV702 110M 1/2W
H-STAT
R728 1.2 1W :RS
D711 RGP10GPKG23
SCREEN
R709 330k 1/2W
RV701 2.2M 1/2W
R718 33k 1/2W
R724 470k 1/2W :RC
C708 0.0047 2kV E
R722 680k 1/2W
L704 33μH :AL
R734 100
+200V
JW703 5MM
CN701 6P
G2
+200V
GND
NC/H2
H1
H2
TO D BOARD CN804
CN702 1P
GND
TAB CONNECTOR
TO CRT COATING EARTH
R741 100 1/2W :RC
R704 8.2k 3W :RS
D706 1SS133T
R705 2.2k 1/2W
C722 47p
D714 1SS133T
D715 1SS133T
R744 2.2k
Q704 BF42L-AMMO R-OUT
Q703 BF871 R-BKG
R714 8.2k 3W :RS
D708 1SS133T
R712 2.2k 1/2W
C723 47p
D716 1SS133T
D717 1SS133T
R745 2.2k
Q707 BF42L-AMMO G-OUT
Q706 BF871 G-BKG
R736 8.2k 3W :RS
D710 1SS133T
R726 2.2k 1/2W
C724 47p
D718 1SS133T
D719 1SS133T
R746 2.2k
Q710 BF42L-AMMO B-OUT
Q709 BF871 B-BKG
+9V
C717 470p B
D702 1SS133T
R711 3.3k
R715 1k
R706 220
Q702 2SC1740S R-DRIVE
C703 680pF :B
R707 180
R708 10MM
R740 680
C718 470p B
D707 1SS133T
R720 3.3k
R723 1k
R716 220
Q705 2SC1740S G-DRIVE
C702 470pF :B
R717 180
R719 10MM
R733 680
C719 470p B
D709 1SS133T
R731 3.3k
R739 1k
R727 220
Q708 2SC1740S B-DRIVE
C712 680pF :B
R729 180
R730 10MM
R735 680
C710 10 250V
CN703 7P WHT :S-MICRO
R IN
G IN
B IN
+9V
GND
AUTO CUTOFF
GND
TO A BOARD CN301
R747 47k
D720 1SS133T
Q711 JA101TP-Q
D703 5MM JW
D704 5MM JW
D713 5MM JW
D705 5MM JW
R748 1k
D701 MTZJ-3.9B
R749 33k
C714 47 16V
R
G
B
①
②
③
④

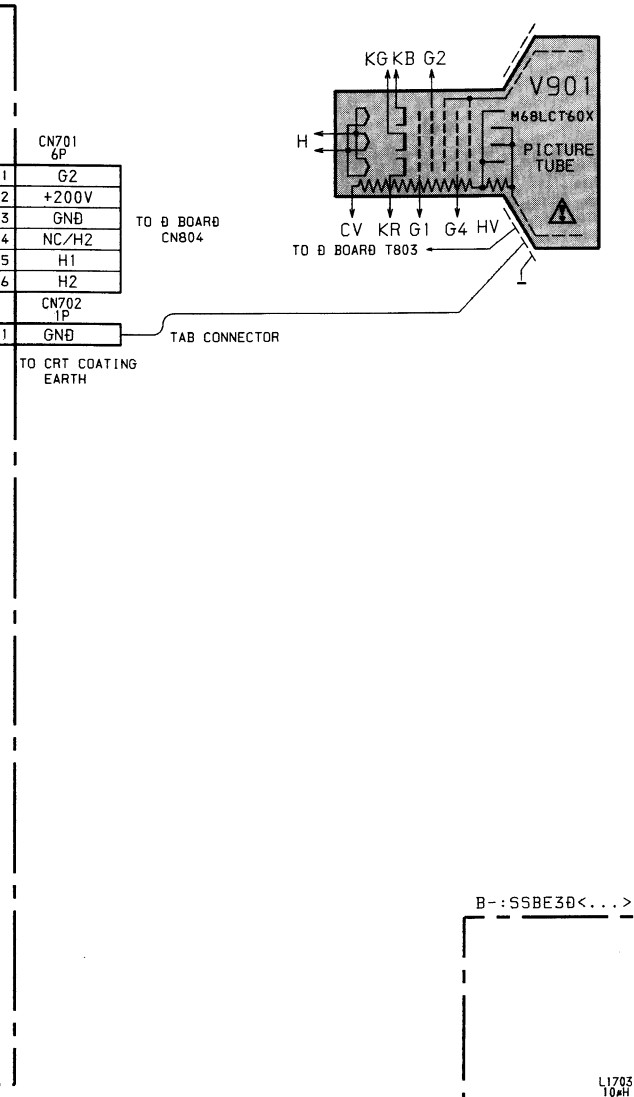

KG KB G2
V901
M68LCT60X
PICTURE TUBE
H
CV KR G1 G4 HV
TO D BOARD T803

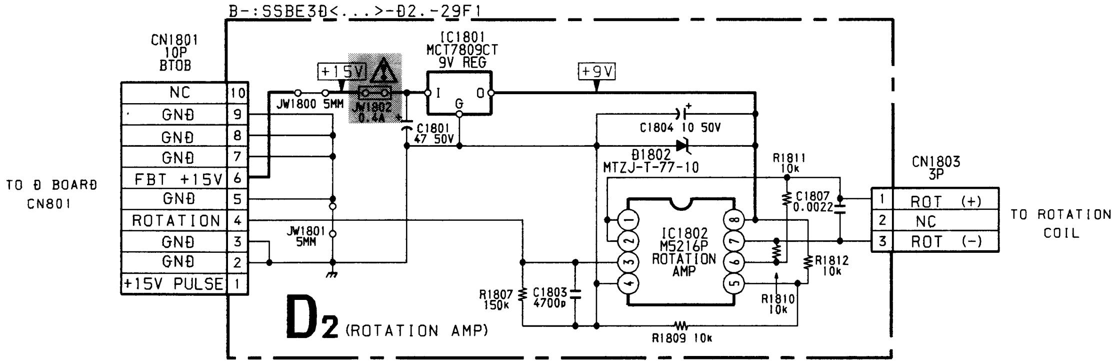

B-:SSBE3D<...>-D2.-29F1
CN1801 10P BTOB
NC
GND
GND
GND
FBT +15V
GND
ROTATION
GND
GND
+15V PULSE
TO D BOARD CN801
+15V
JW1800 5MM
JW1802 0.4A
IC1801 MCT7809CT 9V REG
+9V
C1801 47 50V
C1804 10 50V
D1802 MTZJ-T-77-10
R1811 10k
C1807 0.0022
JW1801 5MM
IC1802 M5216P ROTATION AMP
R1812 10k
R1807 150k
C1803 4700p
R1810 10k
R1809 10k
D2 (ROTATION AMP)

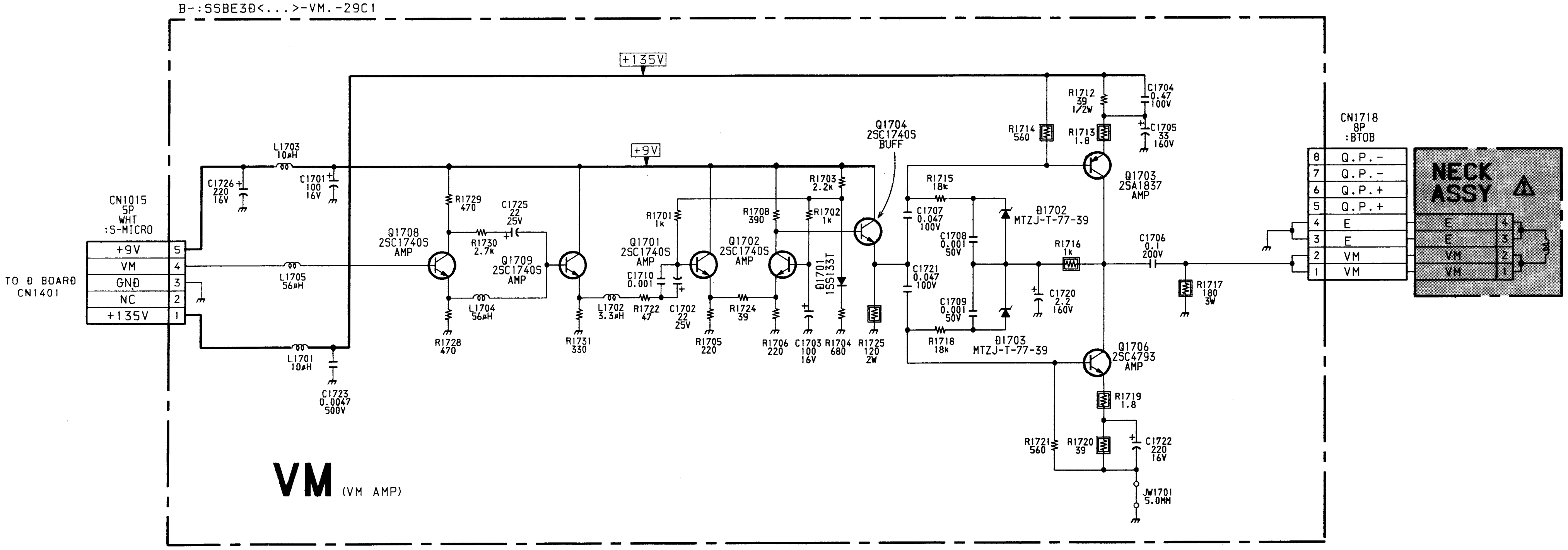

B-:SSBE3D<...>-VM.-29C1
+135V
+9V
CN1015 5P WHT :S-MICRO
+9V
VM
GND
NC
+135V
TO D BOARD CN1401
L1703 10μH
C1726 220 16V
C1701 100 16V
L1705 56μH
L1701 10μH
C1723 0.0047 500V
R1729 470
Q1708 2SC1740S AMP
R1728 470
C1725 22 25V
R1730 2.7k
Q1709 2SC1740S AMP
L1704 56μH
R1731 330
R1701 1k
Q1701 2SC1740S AMP
C1710 0.001
L1702 3.3μH
R1722 47
C1702 22 25V
R1705 220
R1708 390
Q1702 2SC1740S AMP
R1724 39
R1706 220
C1703 100 16V
R1703 2.2k
R1702 1k
D1701 1SS133T
R1704 680
Q1704 2SC1740S BUFF
R1725 120 2W
R1712 39 1/2W
C1704 0.47 100V
R1714 560
R1713 1.8
C1705 33 160V
Q1703 2SA1837 AMP
R1715 18k
C1707 0.047 100V
C1708 0.001 50V
D1702 MTZJ-T-77-39
R1716 1k
C1706 0.1 200V
C1721 0.047 100V
C1709 0.001 50V
C1720 2.2 160V
R1717 180 3W
R1718 18k
D1703 MTZJ-T-77-39
Q1706 2SC4793 AMP
R1719 1.8
R1721 560
R1720 39
C1722 220 16V
JW1701 5.0MM
VM (VM AMP)

## WAVEFORMS C BOARD

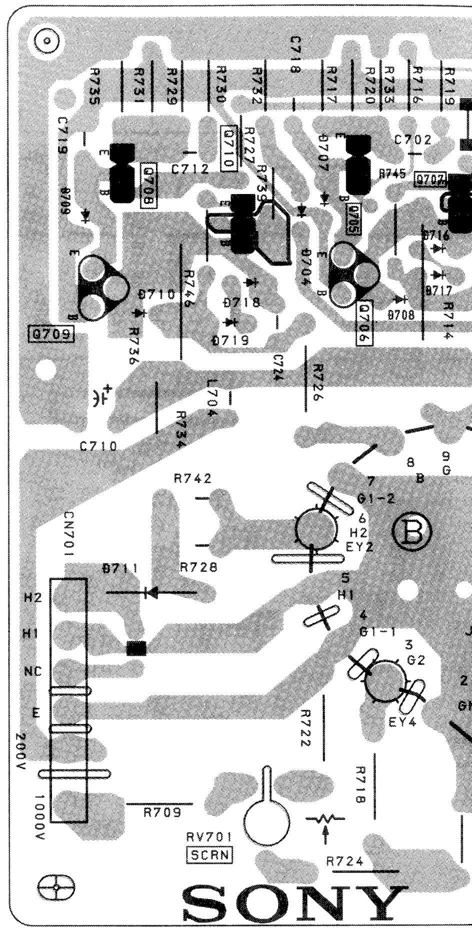



CN701
6P
1 G2
2 +200V
3 GND
4 NC/H2
5 H1
6 H2
TO D BOARD
CN804
CN702
1P
1 GND
TO CRT COATING
EARTH
TAB CONNECTOR
KG KB G2
H
V901
M68LCT60X
PICTURE
TUBE
CV KR G1 G4 HV
TO D BOARD T803

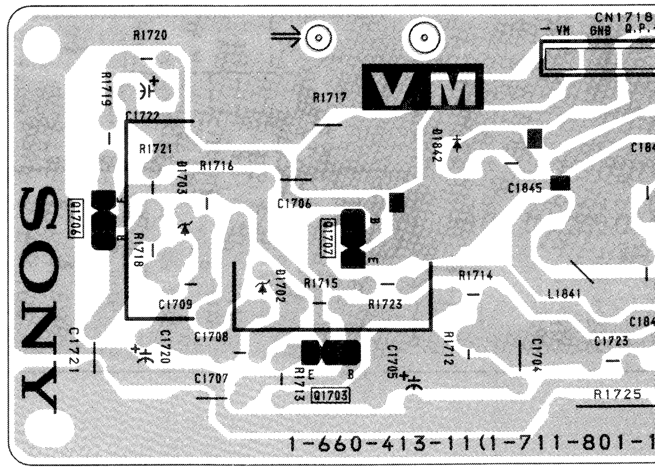

B-:SSBE3D<...>-D2.-29F1
CN1801
10P
BTOB
10 NC
9 GND
8 GND
7 GND
6 FBT +15V
5 GND
4 ROTATION
3 GND
2 GND
1 +15V PULSE
TO D BOARD
CN801
+15V
JW1800 5MM
JW1802
0.4A
IC1801
MCT7809CT
9V REG
I O
G
C1801
47 50V
+9V
C1804 10 50V
D1802
MTZJ-T-77-10
IC1802
M5216P
ROTATION
AMP
JW1801
5MM
R1807
150k
C1803
4700p
R1809 10k
R1810
10k
R1811
10k
C1807
0.0022
R1812
10k
CN1803
3P
1 ROT (+)
2 NC
3 ROT (-)
TO ROTATION
COIL
D2 (ROTATION AMP)


B-:SSBE3D<...>-VM.-29C1
+135V
+9V
CN1015
5P
WHT
:S-MICRO
5 +9V
4 VM
3 GND
2 NC
1 +135V
TO D BOARD
CN1401
L1703
10μH
C1726
220
16V
C1701
100
16V
L1705
56μH
L1701
10μH
C1723
0.0047
500V
Q1708
2SC1740S
AMP
R1729
470
C1725
22
25V
R1730
2.7k
Q1709
2SC1740S
AMP
L1704
56μH
R1728
470
R1731
330
L1702
3.3μH
R1722
47
C1710
0.001
Q1701
2SC1740S
AMP
R1701
1k
C1702
22
25V
R1705
220
Q1702
2SC1740S
AMP
R1708
390
R1724
39
R1706
220
C1703
100
16V
R1703
2.2k
R1702
1k
D1701
1SS133T
R1704
680
Q1704
2SC1740S
BUFF
R1725
120
2W
R1715
18k
C1707
0.047
100V
C1708
0.001
50V
C1721
0.047
100V
C1709
0.001
50V
R1718
18k
D1702
MTZJ-T-77-39
D1703
MTZJ-T-77-39
R1716
1k
C1720
2.2
160V
R1712
39
1/2W
C1704
0.47
100V
C1705
33
160V
R1714
560
R1713
1.8
Q1703
2SA1837
AMP
C1706
0.1
200V
R1717
180
3W
Q1706
2SC4793
AMP
R1719
1.8
R1721
560
R1720
39
C1722
220
16V
JW1701
5.0MM
CN1718
8P
:BTOB
8 Q.P.-
7 Q.P.-
6 Q.P.+
5 Q.P.+
4 E
3 E
2 VM
1 VM
NECK
ASSY
VM (VM AMP)

## C Board

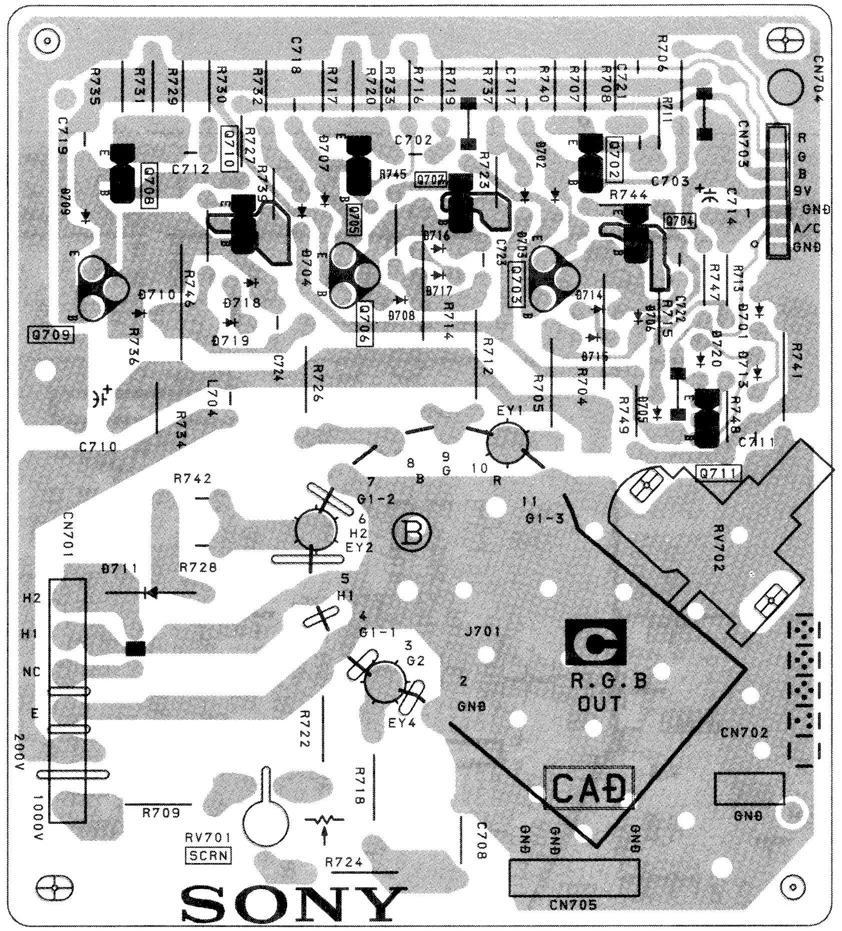

R735
R731
R729
R730
R732
C718
R717
R720
R733
R716
R719
C719
Q708
Q710
C712
R727
R739
D707
C702
R745
Q702
D709
Q705
D704
R746
D710
D718
D719
D716
D717
D708
Q709
R736
Q706
R726
C724
L704
R734
C710
R742
B
G1-2
H2
EY2
D711
R728
CN701
H2
H1
NC
E
200V
1000V
G1-1
G2
EY4
R722
R718
R709
RV701
SCRN
R724
SONY

## VM Board


R1720
CN1718
R1719
C1722
R1717
VM
R1721
D1703
R1716
D1842
R1718
Q1706
C1706
C1845
Q1707
R1715
R1714
D1702
R1723
L1841
C1709
C1720
C1708
C1705
R1712
C1704
C1723
R1713
Q1703
C1707
C1721
R1725
SONY
1-660-413-11(1-711-801-1

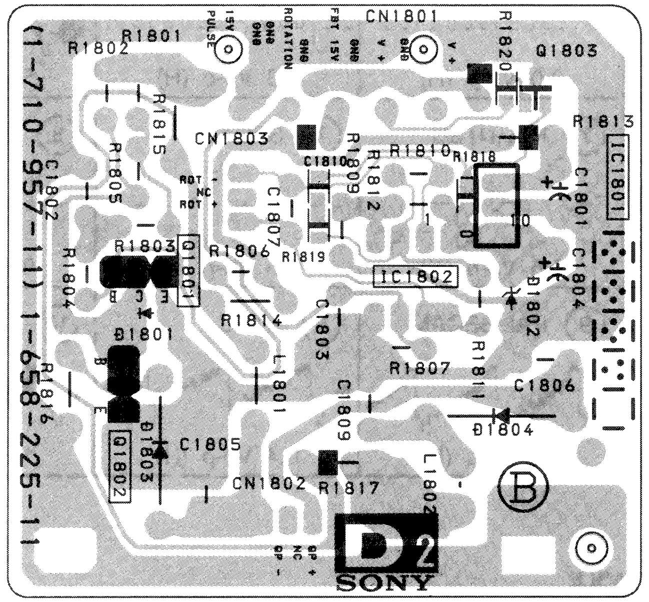
## C [ R, G, B OUT ] VM [ VM AMP ]

### C Board

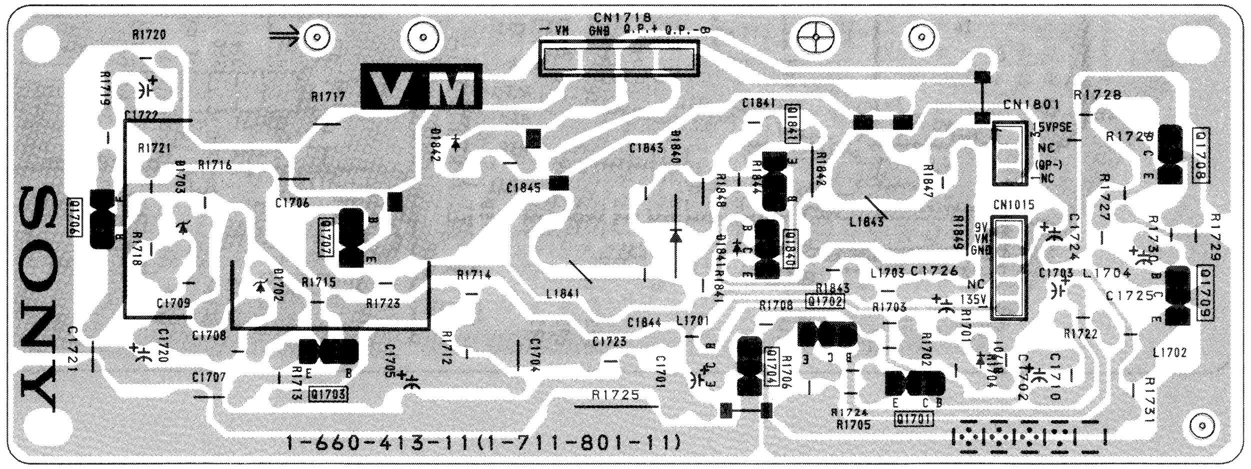

CN704
CN703
CN701
CN702
CN705
J701
EY1
EY2
EY4
RV701
SCRN
RV702
C
R.G.B
OUT
CAD
GND
H2
H1
NC
E
200V
1000V
SONY

## D2 [ ROTATION AMP ]

### D2 Board


CN1801
CN1802
CN1803
IC1801
IC1802
Q1801
Q1802
Q1803
(1-710-957-11) 1-658-225-11
D2
SONY

### VM Board


CN1718
CN1801
CN1015
VM
SONY
1-660-413-11(1-711-801-11)

### C BOARD TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q702 | 2.0 | 11.4 | 1.4 |
| Q703 | 12.0 | 168.3 | 11.4 |
| Q704 | 168.3 | 6.0 | 163.5 |
| Q705 | 1.7 | 11.4 | 1.2 |
| Q706 | 12.0 | 178.8 | 11.4 |
| Q707 | 178.2 | 6.2 | 173.8 |
| Q708 | 2.0 | 11.4 | 1.4 |
| Q709 | 12.0 | 168.3 | 11.4 |
| Q710 | 168.0 | 6.4 | 160.0 |

### VM BOARD TRANSISTOR VOLTAGE TABLE

| Transistor Voltage Table | | | |
|---|---|---|---|
| Ref No | B Base | C Collector | E Emitter |
| Q1701 | 2.5 | 8.8 | 1.8 |
| Q1702 | 2.5 | 5.5 | 1.8 |
| Q1703 | 134.3 | 71.8 | 134.8 |
| Q1704 | 5.5 | 8.8 | 4.8 |
| Q1706 | 1.0 | 71.8 | 0.4 |
| Q1707 | 0.7 | - | - |
| Q1708 | 2.9 | 6.6 | 2.2 |
| Q1709 | 2.2 | 8.8 | 1.5 |
| Q1840 | 0.6 | - | - |

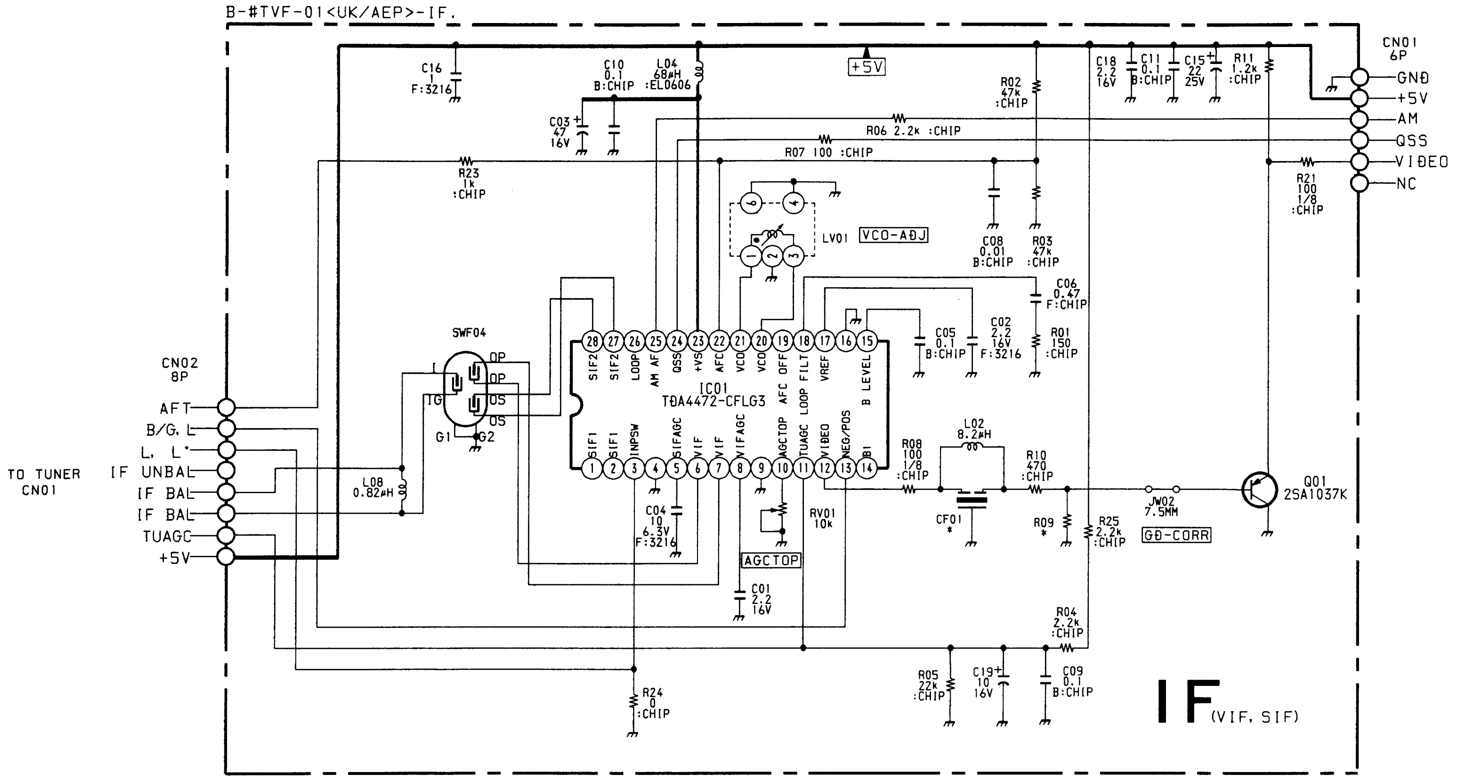
### D2 BOARD IC VOLTAGE TABLE

| IC Voltage Table | | |
|---|---|---|
| Ref No | Pin No | Voltage (V) |
| IC1802 | 1-2 | 2.8 |
| | 3 | 3.0 |
| | 5-6 | 4.4 |
| | 7 | 6.2 |
| | 8 | 9.0 |

**IF** [ VIF, SIF ]

## TUVIF (AEP) (KV-29X1A, 29X1D, 29X1E, 29X1K, 29X1L and 29X1R ONLY)

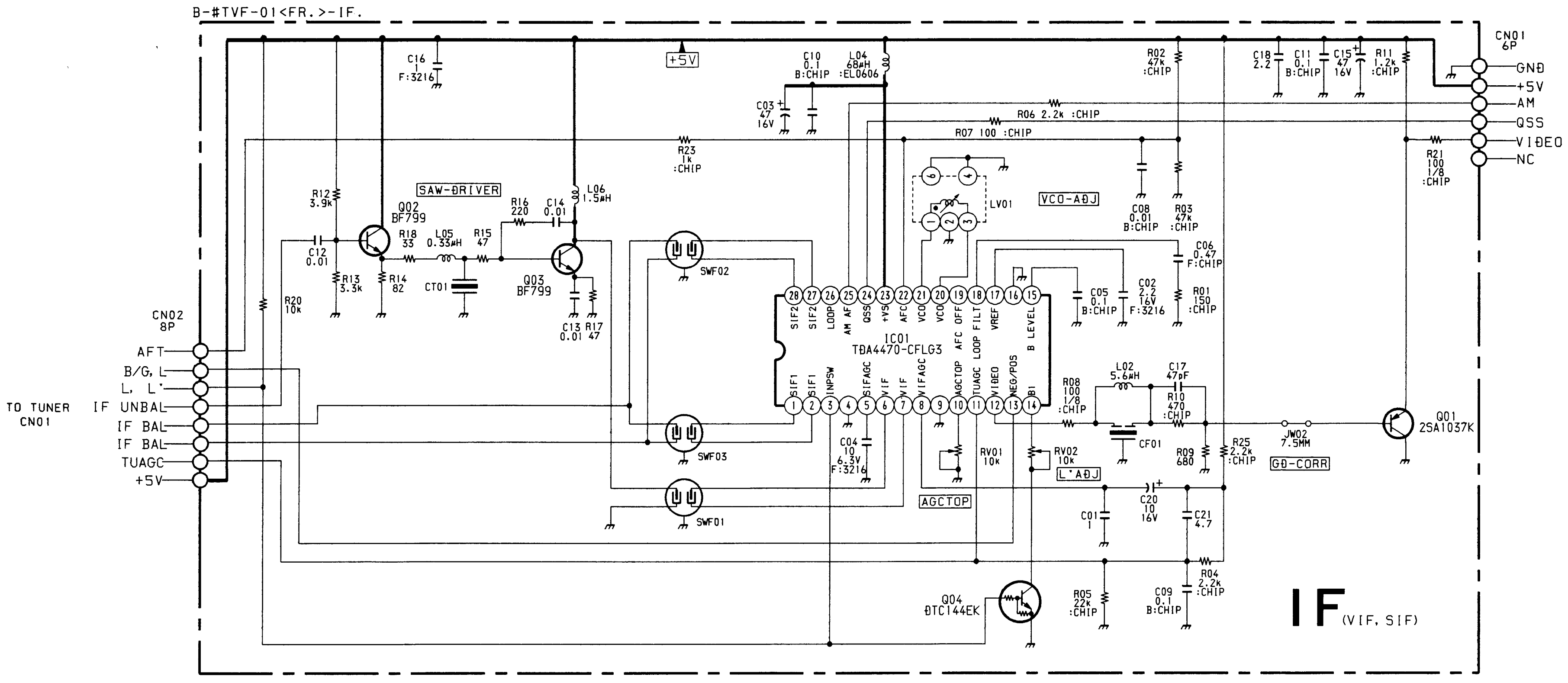
## TUVIF (UK) (KV-29X1U ONLY)


B-#TVF-01<UK/AEP>-IF.
IC01 TDA4472-CFLG3
SWF04
LV01 VCO-ADJ
AGCTOP
GD-CORR
Q01 2SA1037K
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
IF (VIF, SIF)

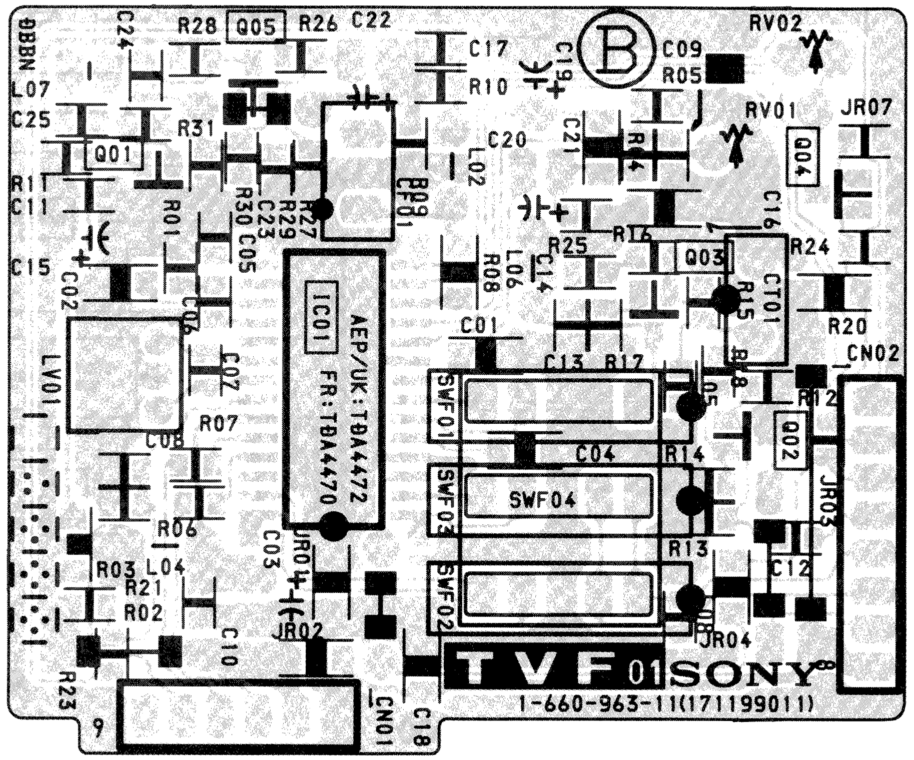
### IF Board

| Model / Ref. No. | 29X1A | 29X1D | 29X1E | 29X1K | 29X1L | 29X1R | 29X1U |
|---|---|---|---|---|---|---|---|
| CF01 | 5.5MHz | 5.5MHz | 5.5MHz | 5.5MHz | 5.5MHz | 5.5MHz | 6.0MHz |
| R09 | 680MF | 680MF | 680MF | 680MF | 680MF | 680MF | 1K |

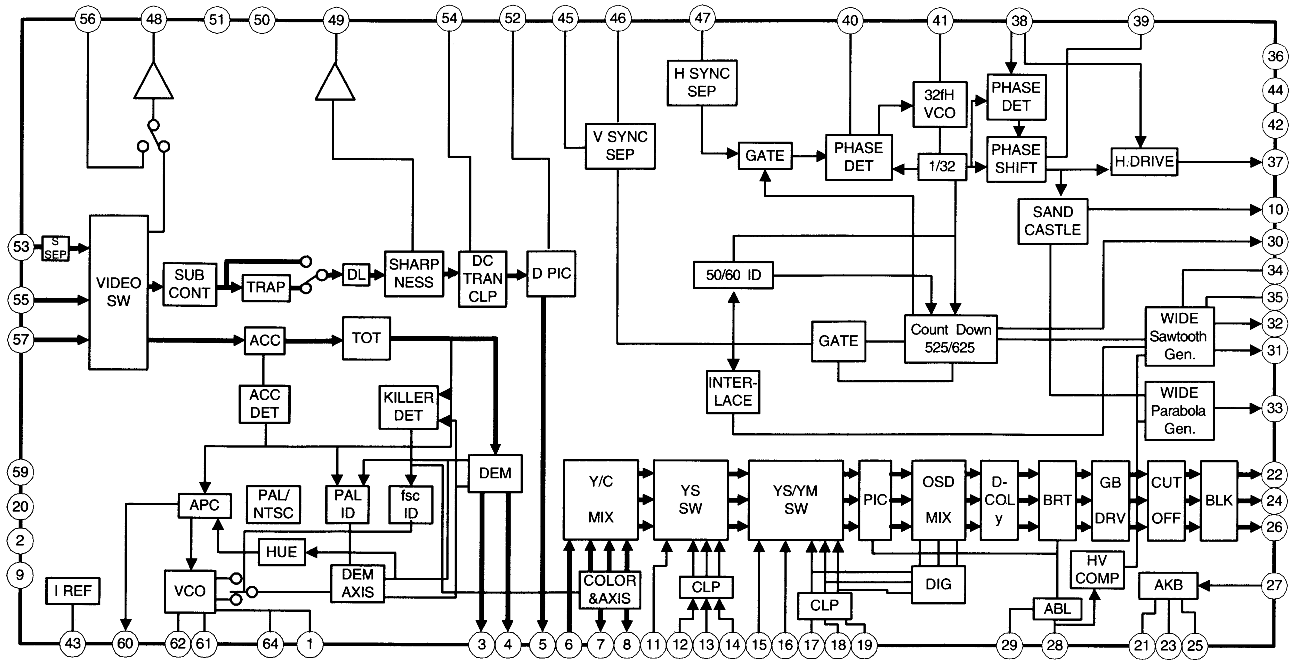
## TUVIF (FR) (KV-29X1B ONLY)


B-#TVF-01<FR.>-IF.
IC01 TDA4470-CFLG3
SAW-DRIVER
Q02 BF799
Q03 BF799
SWF01
SWF02
SWF03
LV01 VCO-ADJ
AGCTOP
L'ADJ
GD-CORR
Q01 2SA1037K
Q04 DTC144EK
CN01 6P
GND
+5V
AM
QSS
VIDEO
NC
CN02 8P
AFT
B/G, L
L, L'
IF UNBAL
IF BAL
IF BAL
TUAGC
+5V
TO TUNER CN01
IF (VIF, SIF)

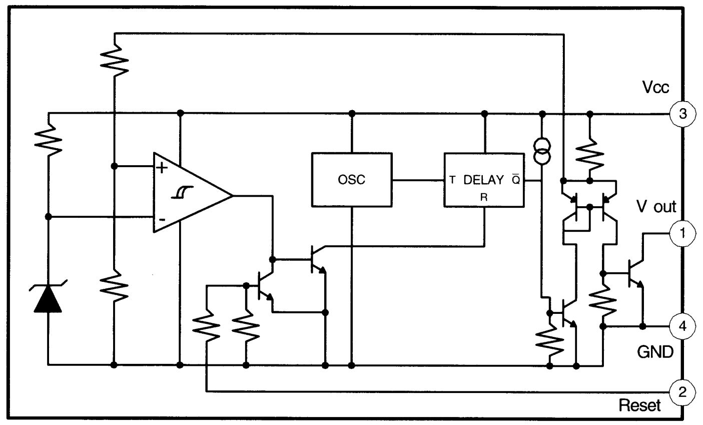
### IF Board


AEP/UK:TDA4472
FR:TDA4470
IC01
SWF01
SWF02
SWF03
SWF04
CN01
CN02
LV01
RV01
RV02
TVF01 SONY
1-660-963-11(171199011)

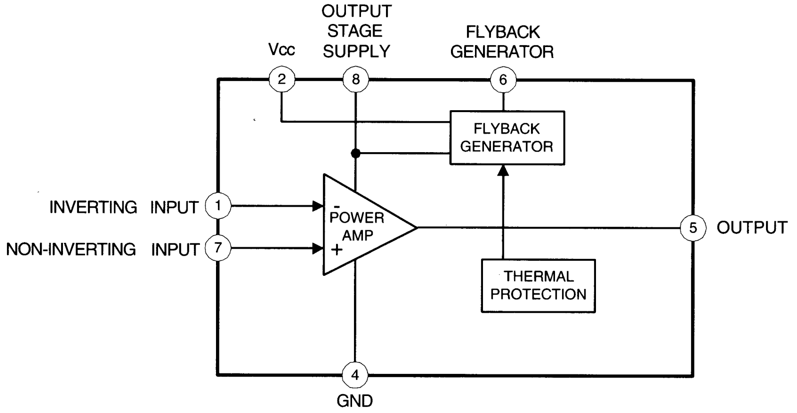
## A BOARD IC301 CXA2000Q-TL


56
48
51
50
49
54
52
45
46
47
40
41
38
39
36
44
42
37
10
30
34
35
32
31
33
22
24
26
27
53
55
57
59
20
2
9
43
60
62
61
64
1
3
4
5
6
7
8
11
12
13
14
15
16
17
18
19
29
28
21
23
25
S SEP
VIDEO SW
SUB CONT
TRAP
DL
SHARP NESS
DC TRAN CLP
D PIC
H SYNC SEP
V SYNC SEP
GATE
PHASE DET
32fH VCO
1/32
PHASE DET
PHASE SHIFT
H.DRIVE
SAND CASTLE
50/60 ID
GATE
Count Down 525/625
WIDE Sawtooth Gen.
WIDE Parabola Gen.
INTER-LACE
ACC
TOT
ACC DET
KILLER DET
DEM
APC
PAL/ NTSC
PAL ID
fsc ID
HUE
DEM AXIS
VCO
I REF
Y/C MIX
COLOR &AXIS
YS SW
CLP
YS/YM SW
CLP
PIC
OSD MIX
DIG
D-COL y
BRT
GB DRV
HV COMP
ABL
CUT OFF
BLK
AKB

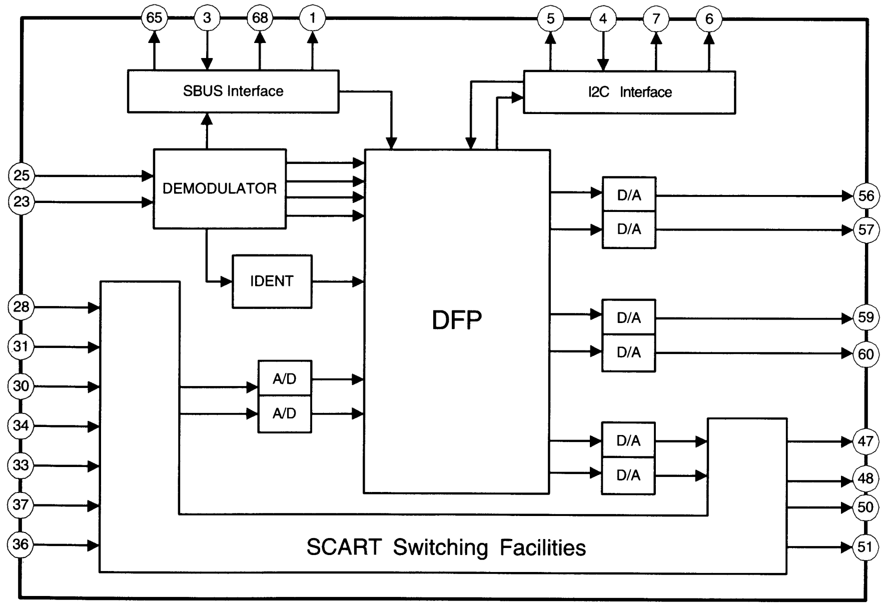
## A BOARD IC4 PST593C


Vcc
3
OSC
T DELAY Q̄
R
V out
1
4
GND
2
Reset
+
-

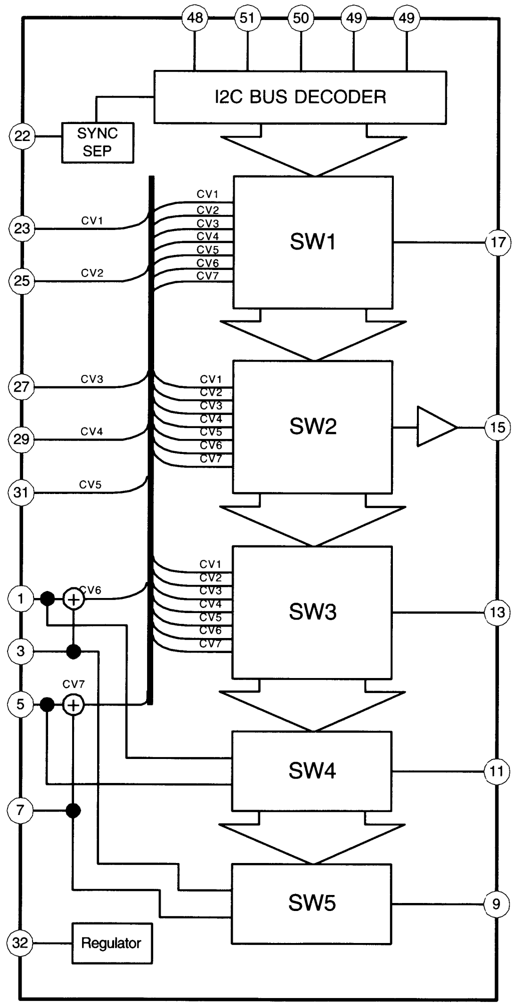
## D BOARD IC500 STV9379


Vcc
OUTPUT STAGE SUPPLY
FLYBACK GENERATOR
2
8
6
FLYBACK GENERATOR
INVERTING INPUT
1
NON-INVERTING INPUT
7
-
POWER AMP
+
5
OUTPUT
THERMAL PROTECTION
4
GND

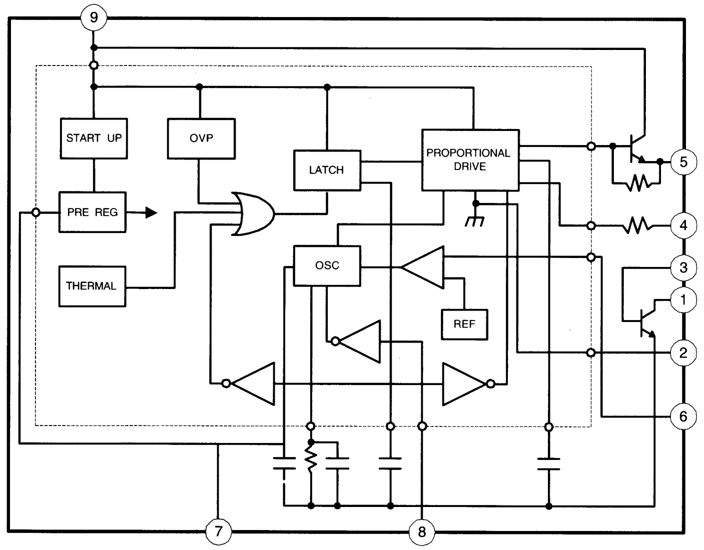
## A BOARD IC202 MSP3410/MSP3400


65
3
68
1
5
4
7
6
SBUS Interface
I2C Interface
25
23
DEMODULATOR
IDENT
DFP
28
31
30
34
33
37
36
A/D
A/D
D/A
D/A
D/A
D/A
D/A
D/A
56
57
59
60
47
48
50
51
SCART Switching Facilities

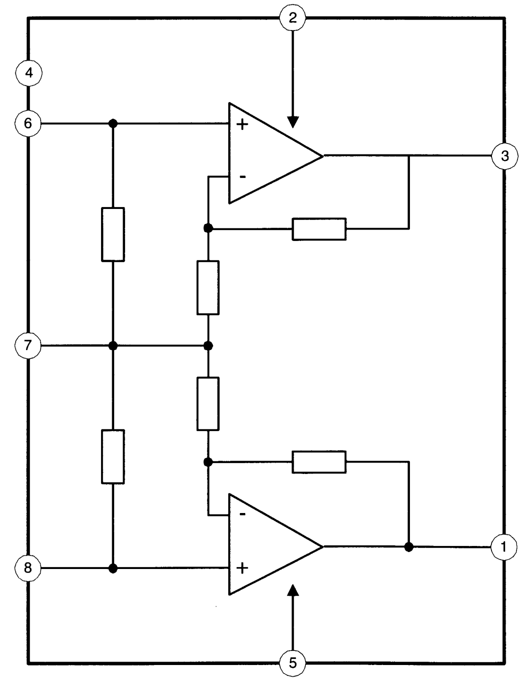
## A BOARD IC201 CXA2040Q


48
51
50
49
49
I2C BUS DECODER
22
SYNC SEP
23
CV1
25
CV2
CV1
CV2
CV3
CV4
CV5
CV6
CV7
SW1
17
27
CV3
29
CV4
31
CV5
SW2
15
1
CV6
3
5
CV7
7
SW3
13
SW4
11
SW5
9
32
Regulator

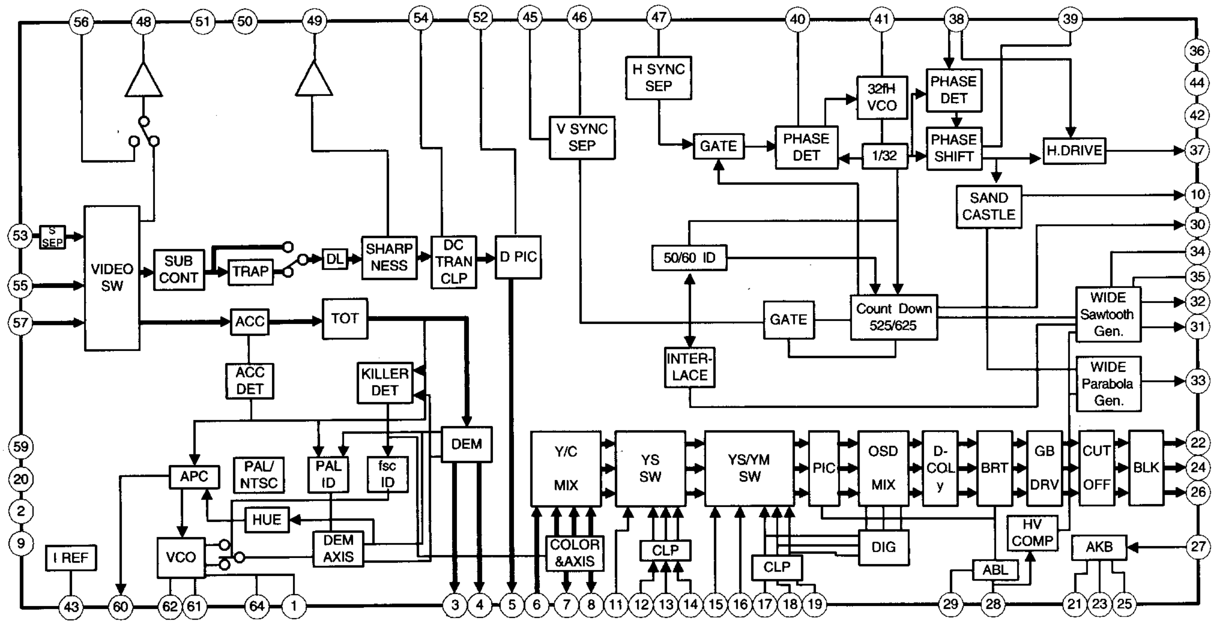
## D BOARD IC600 STR-S6708


9
START UP
OVP
LATCH
PROPORTIONAL DRIVE
PRE REG
THERMAL
OSC
REF
5
4
3
1
2
6
7
8

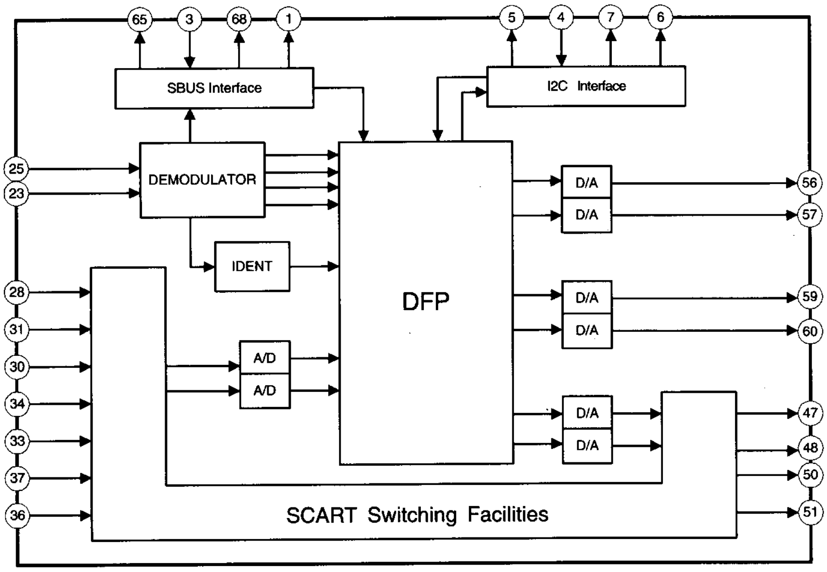
## D BOARD IC1200 TDA7264



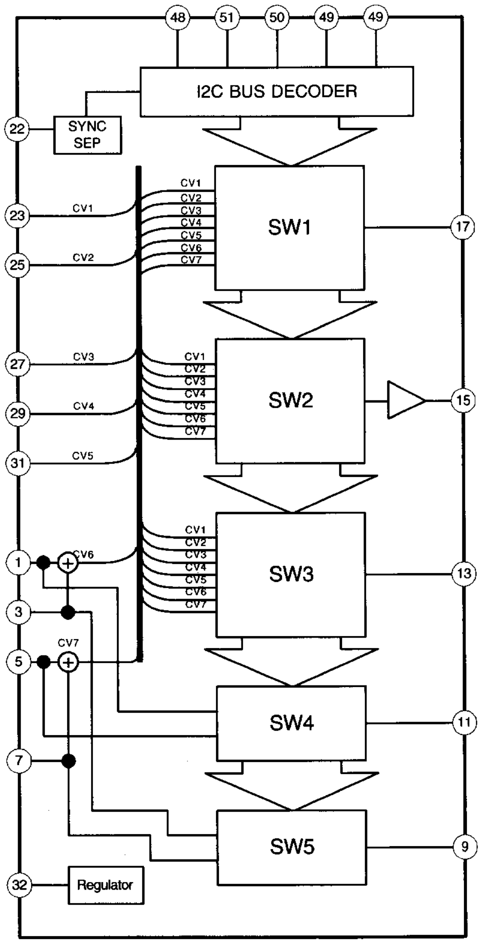
## A BOARD IC301 CXA2000Q-TL


S SEP
VIDEO SW
SUB CONT
TRAP
DL
SHARP NESS
DC TRAN CLP
D PIC
ACC
TOT
ACC DET
KILLER DET
DEM
APC
PAL/ NTSC
PAL ID
fsc ID
HUE
DEM AXIS
VCO
I REF
V SYNC SEP
H SYNC SEP
GATE
PHASE DET
32fH VCO
1/32
PHASE DET
PHASE SHIFT
H.DRIVE
SAND CASTLE
50/60 ID
GATE
Count Down 525/625
INTER-LACE
WIDE Sawtooth Gen.
WIDE Parabola Gen.
Y/C MIX
COLOR &AXIS
YS SW
CLP
YS/YM SW
CLP
PIC
OSD MIX
DIG
D-COL y
BRT
GB DRV
HV COMP
ABL
CUT OFF
BLK
AKB

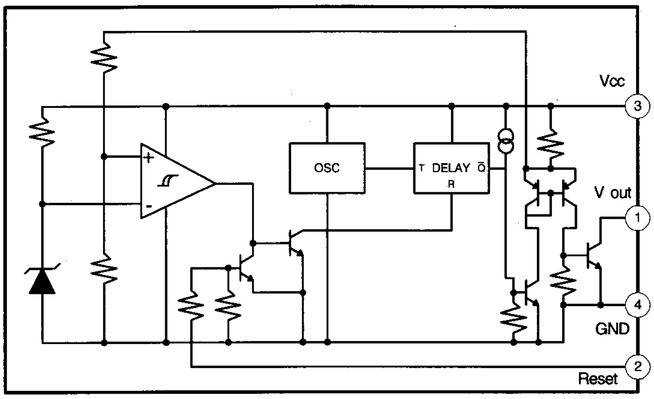
## A BOARD IC202 MSP3410B-PS/MSP3400C-P5


SBUS Interface
I2C Interface
DEMODULATOR
IDENT
DFP
A/D
A/D
D/A
D/A
D/A
D/A
D/A
D/A
SCART Switching Facilities

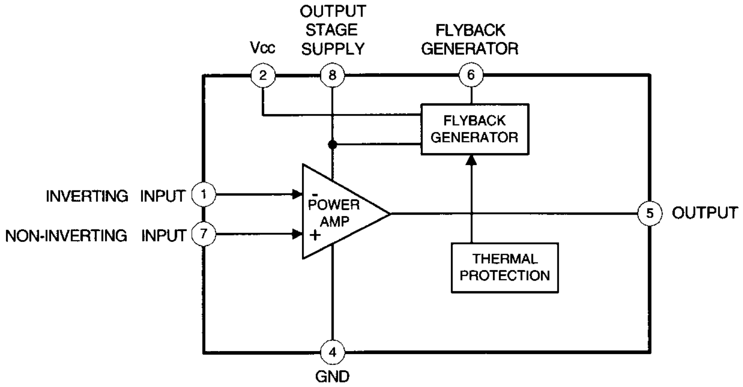
## A BOARD IC201 CXA2040Q


I2C BUS DECODER
SYNC SEP
CV1
CV2
CV3
CV4
CV5
CV6
CV7
SW1
SW2
SW3
SW4
SW5
Regulator

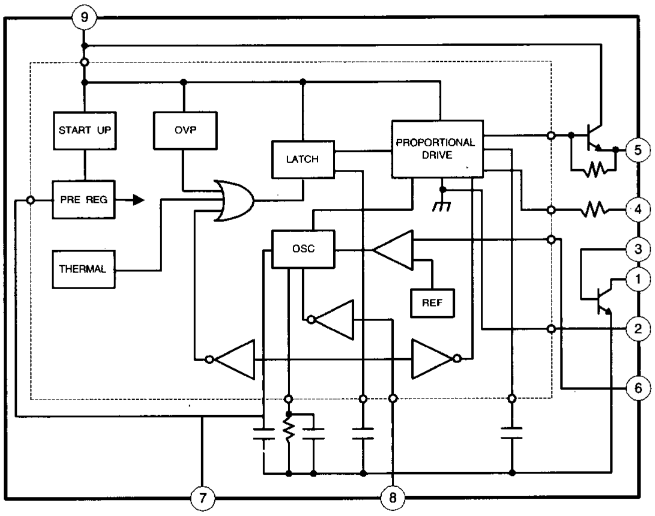
## A BOARD IC4 PST593C-MMP-4P


OSC
T DELAY Ō
R
Vcc
3
V out
1
4
GND
2
Reset

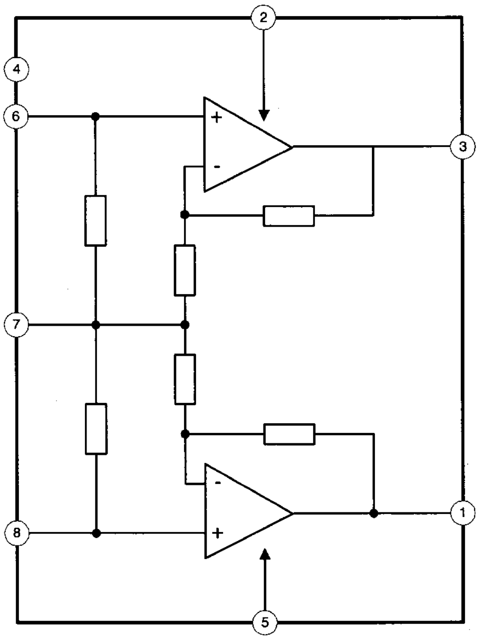
## D BOARD IC500 STV9379


Vcc
2
OUTPUT STAGE SUPPLY
8
FLYBACK GENERATOR
6
FLYBACK GENERATOR
INVERTING INPUT
1
NON-INVERTING INPUT
7
-
POWER AMP
+
5
OUTPUT
THERMAL PROTECTION
4
GND

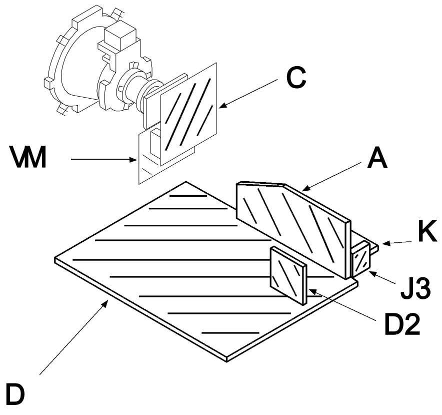
## D BOARD IC600 STR-S6709


9
START UP
OVP
LATCH
PROPORTIONAL DRIVE
PRE REG
THERMAL
OSC
REF
5
4
3
1
2
6
7
8

## D BOARD IC1200 TDA7264



## 5-2. CIRCUIT BOARDS LOCATION



## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

**Note :**

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
  k = 1000 , M = 1000K
- Indication of resistance, which does not have one for rating electrical power, is as follows.

| Pitch : 5 mm<br>Rating electrical power ¼ W |
|---|

- ⊣▭⊢ : nonflammable resistor.
- △ : internal component.
- ▭ : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth - ground.
- ⏚ : earth - chassis.
- ⧺ : no mounted.

> **Note :** The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

> **Note :** Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

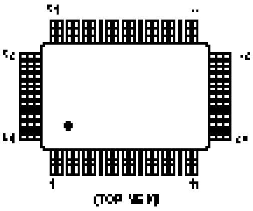
**Reference information**

| | | |
|---|---|---|
| RESISTOR | : RN | METAL FILM |
| | : RC | SOLID |
| | : FPRD | NONFLAMMABLE CARBON |
| | : FUSE | NONFLAMMABLE FUSIBLE |
| | : RS | NONFLAMMABLE METAL OXIDE |
| | : RB | NONFLAMMABLE CEMENT |
| | : RW | NONFLAMMABLE WIREWOUND |
| | : ※ | ADJUSTABLE RESISTOR |
| COIL | : LF-8L | MICRO INDUCTOR |
| CAPACITOR | : TA | TANTALUM |
| | : PS | STYROL |
| | : PP | POLYPROPYLENE |
| | : PT | MYLAR |
| | : MPS | METALIZED POLYESTER |
| | : MPP | METALIZED POLYPROPYLENE |
| | : ALB | BIPOLAR |
| | : ALT | HIGH TEMPERATURE |
| | : ALR | HIGH RIPPLE |

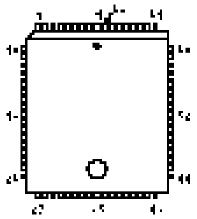
- Readings are taken with a colour-bar signal input.
- Readings are taken with 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
- Circled numbers are waveform references.
- ▬ : B+ bus.
- ➡ : signal path. (RF)

## 5-4. SEMICONDUCTORS

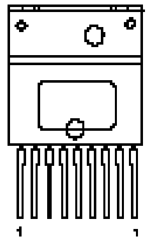
CXA2000Q-TL



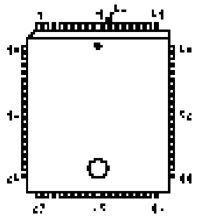
MSP3400C-PS
MSP3410B-PS-F7-T
SDA5273CP-GEG



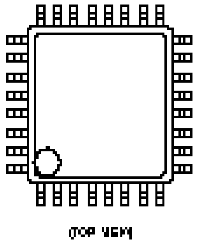
STR-S6709



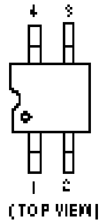
TMS27PC020A-15FML



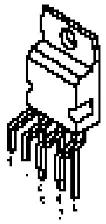
CXA2040Q-T4



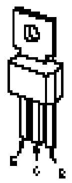
PST593C-MMP-4P


4
3
1
2
(TOP VIEW)

STV9379

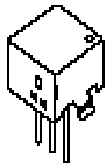


BF871-127

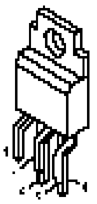


IS474

SBX1790-51

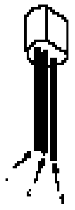


TDA2050



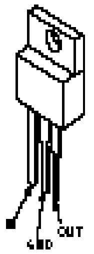
BF421L-AMMO
JA101TP-Q
JC501-Q-AMMO
2SA733-K
2SA933AS

2SA933S
2SA1091-O
2SC3502-F
2SC2808STP-R
2SC3601-E

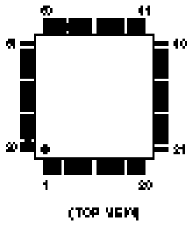


L4941BV
LM2940CT-5.0
LM2940T-9.0
MCT7809CT

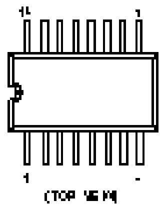
NJM78M09FA
TEA7605
µPC2405HF



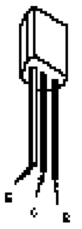
SDA5250M-C5-GEG


41
40
21
20
1
20
(TOP VIEW)

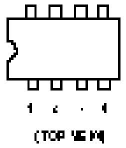
TDA4665T-T



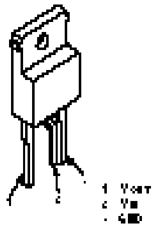
DTA144ES
DTC114ES
DTC143TS
DTC144ES
2SC1740S-RT



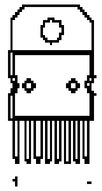
LM393P
M5216P
TDA2822M
µPC393C



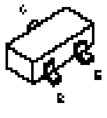
SE-135N


1 Vout
2 Vin
3 GND

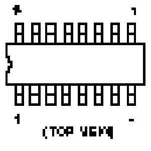
TDA7264



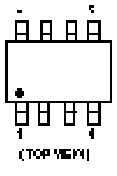
DTC144EK
2SA1037K
2SA1162-G
2SC2412K



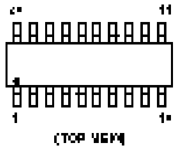
MC14052BDR2



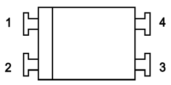
ST24E32M6TR



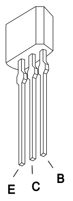
TDA8395T



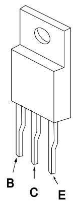
TLP721(D4-)



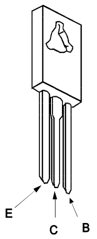
2SA1175-HFE
2SC2785-HFE



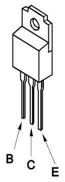
2SA1667
2SA1837
2SC3852A



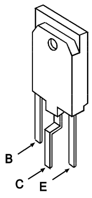
2SC2688-LK



2SC4793

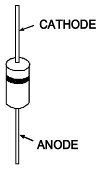


2SC4927-01



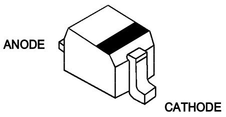
AU-01Z-V1
EG-1Z-V1
EGP20G
EL1Z
EM1-V1
EU-1-V1
EU2A
EU2-V1
FML-G12S

GP08D
RGP02
RGP10GPKG23
RGP15GPKG23
RU3YX-LF-C4
RU3YX-V1
RU4AM-T3
RU4DS

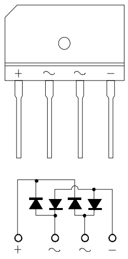

CATHODE
ANODE

BAS216
DTZ6.8C
DTZ9.1
DTZ33B

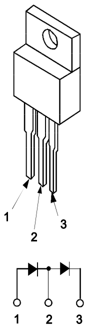
MA8330
1SS355
UDZ-TE-17-5.6B
UDZ-TE-17-9.1B


ANODE
CATHODE

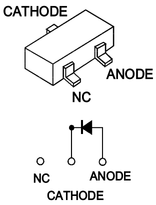
D4SB60L



FMS-3FU

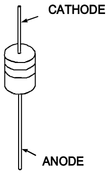


MA3030H(TX)

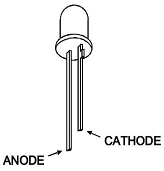

CATHODE
ANODE
NC
NC
ANODE
CATHODE

MTZJ-T-77-9.1A
MTZJ-3.6A
MTZJ-3.9B
MTZJ-5.1B
MTZJ-5.6B
MTZJ-6.2B
MTZJ-6.8B
MTZJ-7.5C
MTZJ-10
MTZJ-39C

RD3.9ESB2
RD5.1ESB2
RD5.6ESB2
RD6.2ESB2
RD6.8ESB2
RD7.5ESB2
RD10ESB2
RD39ES-B2
1SS133T-77


CATHODE
ANODE

SLA-570KT3F


CATHODE
ANODE

# SECTION 6

# EXPLODED VIEWS

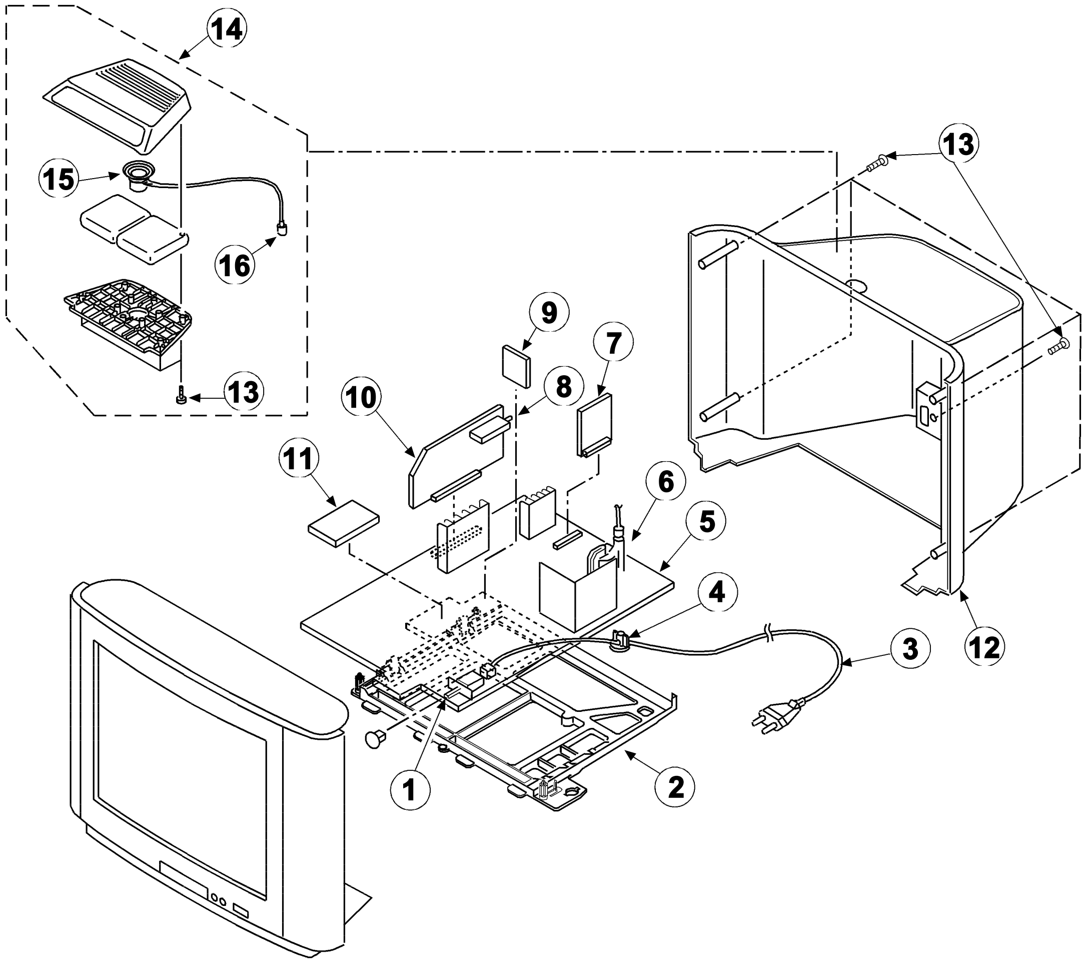
**NOTE :**

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

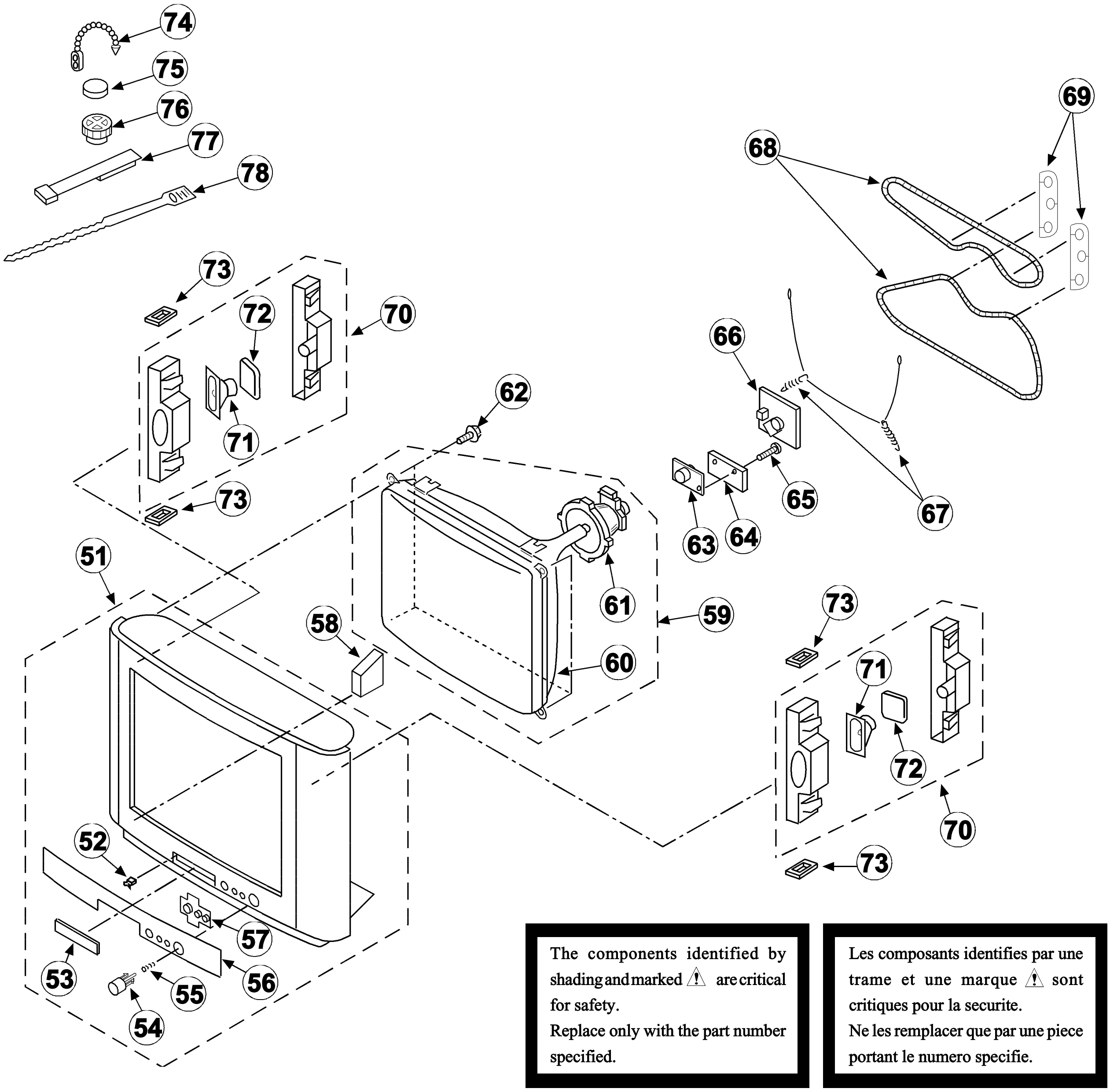
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

## 6-1. CHASSIS



| REF NO | PART NO | DESCRIPTION | REMARK |
|---|---|---|---|
| 1 | ⚠ 1-571-433-21 | SWITCH, PUSH (AC POWER) | |
| 2 | *4-203-526-01 | BRACKET, MAIN | |
| 3 | ⚠ 1-751-680-11 | CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-29C2A/29C2B/29C2D/29C2E) | |
| | ⚠ 1-690-270-21 | CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-29C2K/29C2R) | |
| 4 | ⚠ *4-202-531-01 | AC CORD LOCK (SC) | |
| 5 | *A-1642-174 -A | D BOARD, COMPLETE | |
| 6 | ⚠ 1-453-169-11 | TRANSFORMER ASSY, FLYBACK (UX-1604A2) | |
| 7 | *A-1640-250-A | D2 BOARD, COMPLETE | |
| 8 | 1-693-338-11 | TUNER/VIF (AEP) (KV-29C2A/29C2D/29C2E/29C2K/29C2R) | |
| | 1-693-340-11 | TUNER/VIF (FR) (KV-29C2B) | |
| 9 | *A-1651-087-A | J3 BOARD, COMPLETE | |
| 10 | *A-1632-508-A | A BOARD, COMPLETE (KV-29C2A) | |
| | *A-1632-510-A | A BOARD, COMPLETE (KV-29C2B) | |
| | *A-1632-446-A | A BOARD, COMPLETE (KV-29C2D) | |
| | *A-1632-509-A | A BOARD, COMPLETE (KV-29C2E) | |
| | *A-1632-511-A | A BOARD, COMPLETE (KV-29C2K) | |
| | *A-1632-512-A | A BOARD, COMPLETE (KV-29C2R) | |
| 11 | *A-1649-017-A | K BOARD, COMPLETE | |
| 12 | 4-202-993-11 | COVER REAR | |
| 13 | 4-039-358-01 | SCREW (4x16), (+) BV TAPPING | |
| 14 | A-1678-054-A | BOX ASSY, WOOFER | 13,15,16 |
| 15 | 1-544-767-11 | SPEAKER (13CM) | |
| 16 | 1-696-554-11 | CABLE, SPEAKER (WITH PLUG) | |

## 6-2. PICTURE TUBE



The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

| REF NO | PART NO | DESCRIPTION | REMARK |
|---|---|---|---|
| 51 | X-4200-270-1 | BEZNET ASSY(S) (KV-29C2A/29C2D/29C2K/29C2R) | 52-60 |
| | X-4200-272-1 | BEZNET ASSY(S-N) (KV-29C2B/29C2E) | |
| 52 | 4-392-036-01 | CATCHER, PUSH | |
| 53 | 4-203-013-01 | DOOR (PAINTED) (S) | |
| 54 | 4-202-992-01 | BUTTON, POWER | |
| 55 | 4-202-964-01 | SPRING | |
| 56 | X-4200-271-A | PANEL ASSY(S) (KV-29C2A/29C2D/29C2K/29C2R) | |
| | X-4200-273-A | PANEL ASSY(S) (KV-29C2B/29C2E) | |
| 57 | 4-203-524-01 | WINDOW ORNAMENTAL | |
| 58 | *4-203-098-01 | SUPPORTER, CRT | |
| 59 ⚠ | 8-733-856-51 | ITC | |
| 60 ⚠ | 8-733-856-05 | PICTURE TUBE (SD-269) (M68LCT60X) | |
| 61 ⚠ | 8-451-467-31 | DEFLECTION YOKE (Y29GXA2-B2) | |
| 62 | 4-203-043-01 | SCREW (PT) | |
| 63 ⚠ | 8-453-005-11 | NECK ASSY (NA297-M) | |
| 64 | *A-1644-070-A | VM BOARD, COMPLETE | |
| 65 | 4-039-356-01 | SCREW (3X12), (+) BV TAPPING | |
| 66 | *A-1638-085-A | C BOARD, COMPLETE | |
| 67 | 4-369-318-51 | SPRING, TENSION | |
| 68 ⚠ | 1-406-807-11 | COIL, DEGAUSSING | |
| 69 | 4-202-749-01 | HOLDER, D.G.C.(29"/32") | |
| 70 | *A-1678-087-A | BOX ASSY | 72-73 |
| 71 | 1-504-146-11 | SPEAKER (5X11CM) | |
| 72 | 4-200-999-01 | STOPPER | |
| 73 | *4-202-988-01 | CUSHION, BOX | |
| 74 | 4-308-870-00 | CLIP, LEAD WIRE | |
| 75 | 1-452-032-00 | MAGNET, DISK; 10MM Ø | |
| 76 | 1-452-094-00 | MAGNET, ROTATABLE DISK; 15MM Ø | |
| 77 | X-4387-214-1 | PERMALLOY ASSY, CORRECTION | |
| 78 | 3-701-007-00 | BAND, BINDING | |

# SECTION 7

# ELECTRICAL PARTS LIST

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS

- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the bnard name.

CAPACITORS
MF : mF, PF : mmF

COILS
MMH : mH, μH : mH

**A**

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | *A-1632-508-A | A BOARD, COMPLETE (KV-29C2A) | |
| | | ***************** | |
| | *A-1632-510-A | A BOARD, COMPLETE (KV-29C2B) | |
| | | ***************** | |
| | *A-1632-446-A | A BOARD, COMPLETE (KV-29C2D) | |
| | | ***************** | |
| | *A-1632-509-A | A BOARD, COMPLETE (KV-29C2E) | |
| | | ***************** | |
| | *A-1632-511-A | A BOARD, COMPLETE (KV-29C2K) | |
| | | ***************** | |
| | *A-1632-512-A | A BOARD, COMPLETE (KV-29C2R) | |
| | | ***************** | |
| | 1-750-797-11 | SOCKET, PLCC | |
| | | < CAPACITOR > | |
| C1 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C2 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C3 | 1-163-104-00 | CERAMIC CHIP 30PF 5% | 50V |
| C4 | 1-163-104-00 | CERAMIC CHIP 30PF 5% | 50V |
| C8 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C10 | 1-163-243-11 | CERAMIC CHIP 47PF 5% | 50V |
| C11 | 1-163-243-11 | CERAMIC CHIP 47PF 5% | 50V |
| C14 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C15 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C18 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C19 | 1-163-989-11 | CERAMIC CHIP 0.033MF 10% | 25V |
| C20 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C21 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C22 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |
| C43 | 1-163-121-00 | CERAMIC CHIP 150PF 5% | 50V |
| C45 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C80 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |
| C81 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C82 | 1-163-037-11 | CERAMIC CHIP 0.022MF 10% | 50V |
| C90 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C101 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C102 | 1-126-934-11 | ELECT 220MF 20% | 16V |
| C103 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C104 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V<br>(KV-29C2B) |
| C110 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C112 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C113 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C115 | 1-102-112-00 | CERAMIC 330PF 10% | 50V<br>(KV-29C2B) |
| C120 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| C121 | 1-163-247-11 | CERAMIC CHIP 68PF 5% | 50V |
| C122 | 1-163-137-00 | CERAMIC CHIP 680PF 5% | 50V |
| C123 | 1-163-247-11 | CERAMIC CHIP 68PF 5% | 50V |
| C124 | 1-137-399-11 | FILM 0.1MF 5% | 50V |
| C201 | 1-163-139-00 | CERAMIC CHIP 820PF 5% | 50V |
| C202 | 1-164-004-11 | CERAMIC CHIP 0.1MF 10% | 25V |
| C203 | 1-126-933-11 | ELECT 100MF 20% | 16V |
| C204 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C205 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C206 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C207 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C208 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C209 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C210 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| C211 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C212 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C213 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C214 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C215 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C216 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C217 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C218 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C219 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C220 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C221 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C222 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C223 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C224 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C225 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C226 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C227 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C228 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C229 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C230 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| C231 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C232 | 1-126-967-11 | ELECT 47MF 20% | 16V |
| C251 | 1-163-087-00 | CERAMIC CHIP 4PF 0.25PF | 50V |
| C252 | 1-163-087-00 | CERAMIC CHIP 4PF 0.25PF | 50V |
| C253 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |
| C254 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C255 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |
| C256 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C257 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C258 | 1-126-964-11 | ELECT 10MF 20% | 50V |
| C259 | 1-164-336-11 | CERAMIC CHIP 0.33MF | 25V |

**A**

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| C260 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C261 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C262 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C263 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C264 | 1-126-962-11 | ELECT 3.3MF 20% | 50V |
| C265 | 1-126-964-11 | ELECT 10MF 20% | 50V |
| C266 | 1-126-964-11 | ELECT 10MF 20% | 50V |
| C267 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C268 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C269 | 1-163-131-00 | CERAMIC CHIP 390PF 5% | 50V |
| C270 | 1-163-131-00 | CERAMIC CHIP 390PF 5% | 50V |
| C271 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C272 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C273 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C274 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C275 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C276 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C277 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C278 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C279 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C280 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C281 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C282 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C300 | 1-163-109-00 | CERAMIC CHIP 47PF 5% | 50V |
| C301 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C302 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C303 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C304 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C305 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C306 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C307 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C308 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C309 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C310 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C311 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C312 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C313 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C315 | 1-216-295-00 | METAL GLAZE 0 5% | 1.10W |
| C317 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C319 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% | 50V |
| C320 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C321 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C322 | 1-163-809-11 | CERAMIC CHIP 0.047MF 10% | 25V |
| C323 | 1-163-809-11 | CERAMIC CHIP 0.047MF 10% | 25V |
| C324 | 1-163-809-11 | CERAMIC CHIP 0.047MF 10% | 25V |
| C325 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C326 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C327 | 1-137-374-11 | FILM 0.047MF 5% | 50V |
| C328 | 1-126-964-11 | ELECT 10MF 20% | 50V |
| C329 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C330 | 1-130-777-00 | FILM 0.1MF 5% | 63V |
| C331 | 1-137-581-11 | FILM 0.1MF 5% | 100V |
| C332 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C333 | 1-126-933-11 | ELECT 100MF 20% | 16V |
| C334 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C335 | 1-164-004-11 | CERAMIC CHIP 0.1MF 10% | 25V |
| C336 | 1-163-009-11 | CERAMIC CHIP 0.001MF 10% | 50V |
| C337 | 1-164-009-11 | CERAMIC CHIP 0.001MF 10% | 50V |
| C338 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C339 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C340 | 1-126-933-11 | ELECT 100MF 20% | 16V |
| C341 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C342 | 1-164-346-11 | CERAMIC CHIP 1MF | 16V |
| C343 | 1-163-017-00 | CERAMIC CHIP 0.0047MF 10% | 50V |
| C344 | 1-163-117-00 | CERAMIC CHIP 100PF 5% | 50V |
| C347 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C348 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C350 | 1-126-964-11 | ELECT 10MF 20% | 50V |
| C351 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C352 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C353 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V |
| C354 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C355 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C356 | 1-164-232-11 | CERAMIC CHIP 0.01MF 10% | 50V |
| C357 | 1-163-133-00 | CERAMIC CHIP 470PF 5% | 50V |
| C358 | 1-164-005-11 | CERAMIC CHIP 0.47MF | 25V |
| C359 | 1-163-231-11 | CERAMIC CHIP 15PF 5% | 50V |
| C360 | 1-163-231-11 | CERAMIC CHIP 15PF 5% | 50V |
| C370 | 1-164-505-11 | CERAMIC CHIP 2.2MF | 16V<br>(KV-29C2B/29C2D/29C2E/29C2K/29C2R) |
| C371 | 1-163-141-00 | CERAMIC CHIP 0.001MF 5% | 50V |
| C372 | 1-164-004-11 | CERAMIC CHIP 0.1MF 10% | 25V<br>(KV-29C2B/29C2D/29C2E/29C2K/29C2R) |
| C373 | 1-164-489-11 | CERAMIC CHIP 0.22MF 10% | 16V<br>(KV-29C2B/29C2D/29C2E/29C2K/29C2R) |
| C1001 | 1-163-235-11 | CERAMIC CHIP 22PF 5% | 50V |
| C1002 | 1-163-235-11 | CERAMIC CHIP 22PF 5% | 50V |
| C1010 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C1013 | 1-126-965-11 | ELECT 22MF 20% | 50V |
| C1014 | 1-163-038-00 | CERAMIC CHIP 0.1MF | 25V |
| C1015 | 1-164-489-11 | CERAMIC CHIP 0.22MF 10% | 16V |
| C1020 | 1-163-101-00 | CERAMIC CHIP 22PF 5% | 50V |

< FILTER >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| CF120 | 1-409-327-00 | TRAP, CERAMIC (6.5MHz) (KV-29C2B) | |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| CN1 | 1-695-302-11 | CONNECTOR, BOARD TO BOARD 50P | |
| CN2 | *1-568-880-51 | PLUG, CONNECTOR 5P | |
| CN201 | 1-766-296-11 | CONNECTOR, DUAL SCART | |
| CN301 | *1-568-882-51 | PIN, CONNECTOR 7P | |

< DIODE >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D2 | 8-719-988-62 | DIODE 1SS355 | |
| D10 | 8-719-158-15 | DIODE RD5.6S-B | |
| D11 | 8-719-158-15 | DIODE RD5.6S-B | |
| D12 | 8-719-158-15 | DIODE RD5.6S-B | |
| D101 | 8-719-977-81 | DIODE DTZ33B | |
| D201 | 8-719-977-22 | DIODE DTZ9.1 | |
| D202 | 8-719-977-22 | DIODE DTZ9.1 | |
| D203 | 8-719-977-22 | DIODE DTZ9.1 | |
| D204 | 8-719-977-22 | DIODE DTZ9.1 | |
| D205 | 8-719-977-22 | DIODE DTZ9.1 | |
| D206 | 8-719-977-22 | DIODE DTZ9.1 | |
| D207 | 8-719-977-22 | DIODE DTZ9.1 | |
| D208 | 8-719-977-22 | DIODE DTZ9.1 | |
| D209 | 8-719-977-22 | DIODE DTZ9.1 | |
| D210 | 8-719-977-22 | DIODE DTZ9.1 | |
| D211 | 8-719-977-22 | DIODE DTZ9.1 | |
| D212 | 8-719-977-22 | DIODE DTZ9.1 | |

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D213 | 8-719-977-22 | DIODE DTZ9.1 | |
| D214 | 8-719-977-22 | DIODE DTZ9.1 | |
| D215 | 8-719-977-22 | DIODE DTZ9.1 | |
| D216 | 8-719-158-15 | DIODE RD5.6S-B | |
| D217 | 8-719-158-15 | DIODE RD5.6S-B | |
| D218 | 8-719-158-15 | DIODE RD5.6S-B | |
| D220 | 8-719-988-62 | DIODE 1SS355 | |
| D221 | 8-719-988-62 | DIODE 1SS355 | |
| D222 | 8-719-977-22 | DIODE DTZ9.1 | |
| D223 | 8-719-977-22 | DIODE DTZ9.1 | |
| D224 | 8-719-977-22 | DIODE DTZ9.1 | |
| D225 | 8-719-977-22 | DIODE DTZ9.1 | |
| D226 | 8-719-977-22 | DIODE DTZ9.1 | |
| D227 | 8-719-977-13 | DIODE DTZ6.8C | |
| D251 | 8-719-047-16 | DIODE BAS216 | |
| D320 | 8-719-977-22 | DIODE DTZ9.1 | |
| D370 | 8-719-047-16 | DIODE BAS216 | (KV-29C2B/29C2D/29C2E/29C2K/29C2R) |
| D1010 | 8-719-036-58 | DIODE MA3030-H(TX) | |

< LINE FILTER >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| FL101 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL201 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL202 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL203 | 1-236-071-11 | ENCAPSULATED COMPONENT | |
| FL1001 | 1-236-071-11 | ENCAPSULATED COMPONENT | |

< IC >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| IC1 | 8-759-376-75 | IC SDA5250M-C5-GEG | |
| IC2 | 8-759-334-20 | IC ST24E32M6TR | |
| IC3 | 8-759-353-82 | IC TMS27PC020A-15FML | |
| IC4 | 8-759-394-57 | IC PST593C-MMP-4P | |
| IC201 | 8-752-076-06 | IC CXA2040Q-T4 | |
| IC202 | 8-759-376-80 | IC MSP3410B-PS-F7-T | (KV-29C2B/29C2E) |
| | 8-759-376-56 | IC MSP3400C-PS-C6-T | (KV-29C2A/29C2D/29C2K/29C2R) |
| IC203 | 8-759-385-76 | IC MC14052 BDR2 | |
| IC301 | 8-752-076-09 | IC CXA2000Q-TL | |
| IC302 | 8-759-288-85 | IC TDA4665T-T | |
| IC303 | 8-759-251-56 | IC TDA8395T | (KV-29C2B/29C2D/29C2E/29C2K/29C2R) |
| IC1001 | 8-759-376-76 | IC SDA5273CP-GEG | |

< COIL >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| L10 | 1-410-379-31 | INDUCTOR CHIP 6.8UH | |
| L102 | 1-408-406-00 | INDUCTOR 5.6UH | (KV-29C2B) |
| L111 | 1-410-993-11 | INDUCTOR CHIP 1UH | |
| L120 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L121 | 1-408-397-00 | INDUCTOR 1UH | |
| L122 | 1-408-408-00 | INDUCTOR 8.2UH | |
| L300 | 1-408-607-31 | INDUCTOR 22UH | |

< TRANSISTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| Q1 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q4 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q80 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q81 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q110 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q111 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q112 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q113 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q114 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q120 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q121 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | (KV-29C2B) |
| Q122 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q124 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | (KV-29C2B) |
| Q130 | 8-729-216-22 | TRANSISTOR 2SA1162-G | (KV-29C2B) |
| Q201 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q202 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q203 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q204 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q205 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q206 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q207 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q300 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q304 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q305 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q306 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q330 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q331 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q332 | 8-729-920-74 | TRANSISTOR 2SC2412K-QR | |
| Q1001 | 8-729-901-01 | TRANSISTOR DTC144EK | |
| Q1002 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| JR5 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR6 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR101 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR201 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR204 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR205 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR206 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR207 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| JR304 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W | |
| JR304 | 1-216-296-91 | METAL GLAZE 0 5% 1/8W | |
| R1 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R2 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R3 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R4 | 1-216-013-00 | METAL GLAZE 33 5% 1/10W | |
| R5 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R7 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R8 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R9 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R18 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R19 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R20 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R21 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R24 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R25 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R28 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R29 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R30 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R31 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R32 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R33 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R34 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R35 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R36 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R37 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R38 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |

**A**

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| R39 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R40 | 1-216-067-00 | METAL GLAZE 5.6K 5% 1/10W | |
| R42 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R44 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R46 | 1-216-095-00 | METAL GLAZE 82K 5% 1/10W | |
| R47 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R48 | 1-216-121-91 | METAL GLAZE 1M 5% 1/10W | |
| R49 | 1-216-025-00 | METAL GLAZE 100 5% 1.10W | |
| R54 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R58 | 1-216-063-91 | METAL GLAZE 3.9K 5% 1/10W | |
| R59 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R60 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R61 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R62 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R63 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R64 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R65 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R66 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R67 | 1-216-057-00 | METAL GLAZE 2.2K 5% 1/10W | |
| R69 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R70 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R71 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R72 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R73 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R74 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R75 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R76 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R77 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R78 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R79 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R80 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R81 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R82 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R83 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R84 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R85 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R86 | 1-216-077-00 | METAL GLAZE 15K 5% 1/10W | |
| R87 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R88 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R91 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R92 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R93 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R94 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R95 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R97 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R98 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R101 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | |
| R102 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R103 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R104 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R105 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R106 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R110 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R111 | 1-216-029-00 | METAL GLAZE 150 5% 1/10W | |
| R112 | 1-216-029-00 | METAL GLAZE 150 5% 1/10W | |
| R113 | 1-216-001-00 | METAL GLAZE 10 5% 1/10W | |
| R114 | 1-216-029-00 | METAL GLAZE 150 5% 1/10W | |
| R115 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R116 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R117 | 1-216-055-00 | METAL GLAZE 1.8K 5% 1/10W | |
| R118 | 1-216-071-00 | METAL GLAZE 8.2K 5% 1/10W | |
| R119 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R120 | 1-216-069-00 | METAL GLAZE 6.8K 5% 1/10W | |
| R121 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R122 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R123 | 1-216-031-00 | METAL GLAZE 180 5% 1/10W | |
| R124 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R125 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R126 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | (KV-29C2B) |
| R127 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| R128 | 1-216-035-00 | METAL GLAZE 270 5% 1/10W | |
| R129 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R130 | 1-216-061-00 | METAL GLAZE 3.3K 5% 1/10W | (KV-29C2B) |
| R131 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | (KV-29C2B) |
| R132 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | (KV-29C2B) |
| R133 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | (KV-29C2B) |
| R134 | 1-216-001-00 | METAL GLAZE 10 5% 1/10W | (KV-29C2B) |
| R135 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | (KV-29C2B) |
| R136 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | (KV-29C2B) |
| R137 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | (KV-29C2B) |
| R138 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | (KV-29C2B) |
| R200 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R201 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R202 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R203 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R204 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R205 | 1-216-689-11 | METAL GLAZE 39K 5% 1/10W | |
| R206 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R208 | 1-216-041-00 | METAL GLAZE 470 5% 1/10W | |
| R209 | 1-216-049-00 | METAL GLAZE 1K 5% 1/10W | |
| R210 | 1-216-017-91 | METAL GLAZE 47 5% 1/10W | |
| R211 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R212 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R213 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R214 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R216 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R217 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R218 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |
| R219 | 1-216-113-00 | METAL GLAZE 470K 5% 1/10W | |
| R220 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R221 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R222 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R223 | 1-216-295-00 | METAL GLAZE 0 5% 1/10W | |
| R224 | 1-216-039-00 | METAL GLAZE 390 5% 1/10W | |
| R225 | 1-216-089-00 | METAL GLAZE 47K 5% 1/10W | |
| R226 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R227 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R228 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R229 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R230 | 1-216-022-00 | METAL GLAZE 75 5% 1/10W | |
| R232 | 1-216-025-00 | METAL GLAZE 100 5% 1/10W | |

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R233 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R234 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R235 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R236 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W | |
| R237 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R238 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R239 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R240 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R241 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R242 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W | |
| R243 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R244 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R245 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R246 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R247 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R249 | 1-216-001-00 | METAL GLAZE | 10 | 5% | 1/10W | |
| R255 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R256 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R270 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R271 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R272 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R273 | 1-216-022-00 | METAL GLAZE | 75 | 5% | 1/10W | |
| R280 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R281 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R282 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R283 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R284 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R285 | 1-216-093-00 | METAL GLAZE | 68K | 5% | 1/10W | |
| R286 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W | |
| R300 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R301 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R302 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R303 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R308 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R309 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R310 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R311 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R312 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R313 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R314 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R315 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R316 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R318 | 1-216-689-11 | METAL GLAZE | 39K | 5% | 1/10W | |
| R319 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W | |
| R320 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R321 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R322 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R323 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R324 | 1-216-063-91 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R326 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1.10W | |
| R327 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R328 | 1-216-129-00 | METAL GLAZE | 2.2M | 5% | 1/10W | |
| R329 | 1-216-089-00 | METAL GLAZE | 47K | 5% | 1/10W | |
| R330 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R331 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W | |
| R332 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R333 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W | |
| R334 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R335 | 1-208-806-11 | METAL CHIP | 10K | 0.50% | 1/10W | |
| R336 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W | |

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R337 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R338 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W | |
| R339 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R340 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R341 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R342 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R343 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W | |
| R344 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W | |
| R345 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R346 | 1-216-063-91 | METAL GLAZE | 3.9K | 5% | 1/10W | |
| R347 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R348 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R349 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R350 | 1-216-042-00 | METAL GLAZE | 510 | 5% | 1/10W | |
| R351 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W | |
| R352 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W | |
| R353 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W | |
| R354 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R357 | 1-216-049-00 | METAL GLAZE | 1K | 5% | 1/10W | |
| R370 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R1001 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R1002 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R1010 | 1-216-295-00 | METAL GLAZE | 0 | 5% | 1/10W | |
| R1012 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W | |
| R1014 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W | |
| R1020 | 1-216-097-00 | METAL GLAZE | 100K | 5% | 1/10W | |
| R1021 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R1022 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R1023 | 1-216-029-00 | METAL GLAZE | 150 | 5% | 1/10W | |
| R1024 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R1026 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R1027 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |
| R1028 | 1-216-025-00 | METAL GLAZE | 100 | 5% | 1/10W | |

< TUNER >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| TU101 | 1-693-338-11 | TUNER/VIF (AEP)<br>(KV-29C2A/29C2D/29C2E/29C2K/29C2R) | |
| | 1-693-340-11 | TUNER/VIF (FR) (KV-29C2B) | |

< CRYSTAL >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| X1 | 1-767-154-21 | VIBRATOR, CERAMIC | |
| X201 | 1-760-628-11 | VIBRATOR, CRYSTAL 18.432MHz | |
| X301 | 1-567-504-11 | OSCILLATOR, CRYSTAL | |
| X302 | 1-567-505-11 | OSCILLATOR, CRYSTAL | |
| X303 | 1-767-127-11 | VIBRATOR, CERAMIC | |
| X1001 | 1-579-965-21 | VIBRATOR, CRYSTAL 20.5MHz | |

***************************************************************

*A-1638-085-A C BOARD, COMPLETE
*****************

< CAPACITOR >

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| C702 | 1-102-115-00 | CERAMIC | 560PF | 10% | 50V | |
| C703 | 1-102-116-00 | CERAMIC | 680PF | 10% | 50V | |
| C708 | 1-162-114-00 | CERAMIC | 0.0047MF | | 2KV | |
| C710 | 1-107-652-11 | ELECT | 10MF | 20% | 250V | |
| C712 | 1-102-116-00 | CERAMIC | 680PF | 10% | 50V | |
| C714 | 1-126-967-11 | ELECT | 47MF | 20% | 16V | |
| C717 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V | |

**C** **D2**

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| C718 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V | |
| C719 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V | |
| C722 | 1-101-880-00 | CERAMIC | 47PF | 5% | 50V | |
| C723 | 1-101-880-00 | CERAMIC | 47PF | 5% | 50V | |
| C724 | 1-101-880-00 | CERAMIC | 47PF | 5% | 50V | |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN701 | 1-778-037-11 | PIN, CONNECTOR 6P |
| CN702 | 1-695-915-11 | TAB (CONTACT) |
| CN703 | *1-568-882-51 | PIN, CONNECTOR 7P |

< DIODE >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| D701 | 8-719-109-72 | DIODE RD3.9ES-B2 |
| D702 | 8-719-991-33 | DIODE 1SS133T-77 |
| D706 | 8-719-991-33 | DIODE 1SS133T-77 |
| D707 | 8-719-991-33 | DIODE 1SS133T-77 |
| D708 | 8-719-991-33 | DIODE 1SS133T-77 |
| D709 | 8-719-991-33 | DIODE 1SS133T-77 |
| D710 | 8-719-991-33 | DIODE 1SS133T-77 |
| D711 | 8-719-302-43 | DIODE EL1Z |
| D714 | 8-719-991-33 | DIODE 1SS133T-77 |
| D715 | 8-719-991-33 | DIODE 1SS133T-77 |
| D716 | 8-719-991-33 | DIODE 1SS133T-77 |
| D717 | 8-719-991-33 | DIODE 1SS133T-77 |
| D718 | 8-719-991-33 | DIODE 1SS133T-77 |
| D719 | 8-719-991-33 | DIODE 1SS133T-77 |
| D720 | 8-719-991-33 | DIODE 1SS133T-77 |

< CRT SOCKET >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| J701 ⚠ | 1-526-990-22 | SOCKET, CRT |

< COIL >

| REF.NO. | PART NO. | DESCRIPTION | |
|---|---|---|---|
| L704 | 1-408-609-41 | INDUCTOR | 33UH |

< TRANSISTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q702 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q703 | 8-729-906-70 | TRANSISTOR BF871-127 |
| Q704 | 8-729-200-17 | TRANSISTOR 2SA1091-O |
| Q705 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q706 | 8-729-906-70 | TRANSISTOR BF871-127 |
| Q707 | 8-729-200-17 | TRANSISTOR 2SA1091-O |
| Q708 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |
| Q709 | 8-729-906-70 | TRANSISTOR BF871-127 |
| Q710 | 8-729-200-17 | TRANSISTOR 2SA1091-O |
| Q711 | 8-729-173-38 | TRANSISTOR 2SA733-K |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R704 | 1-216-486-00 | METAL OXIDE | 8.2K | 5% | 3W | F |
| R705 | 1-202-822-00 | SOLID | 2.2K | 10% | 1/2W | |
| R706 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W | |
| R707 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W | |
| R709 | 1-202-844-00 | SOLID | 330K | 10% | 1/2W | |
| R711 | 1-247-843-11 | CARBON | 3.3K | 5% | 1.4W | |
| R712 | 1-202-822-00 | SOLID | 2.2K | 10% | 1/2W | |
| R714 | 1-216-486-00 | METAL OXIDE | 8.2K | 5% | 3W | F |
| R715 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R716 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W | |
| R717 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W | |
| R718 | 1-202-814-11 | SOLID | 33K | 10% | 1/2W | |
| R720 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R722 | 1-202-848-00 | SOLID | 680K | 10% | 1/2W | |
| R723 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R724 | 1-202-846-00 | SOLID | 470K | 10% | 1/2W | |
| R726 | 1-202-822-00 | SOLID | 2.2K | 10% | 1/2W | |
| R727 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W | |
| R728 | 1-216-350-11 | METAL OXIDE | 1.2 | 5% | 1W | F |
| R729 | 1-249-408-11 | CARBON | 180 | 5% | 1/4W | |
| R731 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W | |
| R733 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R734 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R735 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R736 | 1-216-486-00 | METAL OXIDE | 8.2K | 5% | 3W | F |
| R739 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R740 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | |
| R741 | 1-202-549-00 | SOLID | 100 | 20% | 1/2W | |
| R744 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R745 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R746 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R747 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R748 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R749 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |

< VARIABLE RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| RV701 | 1-230-641-11 | RES, ADJ, METAL GLAZE 2.2M |
| RV702 | 1-241-656-21 | RES, ADJ, METAL FILM 110M |

********************************************************************

*A-1640-250-A D2 BOARD, COMPLETE
******************

< CAPACITOR >

| REF.NO. | PART NO. | DESCRIPTION | | | |
|---|---|---|---|---|---|
| C1801 | 1-126-967-11 | ELECT | 47MF | 20% | 50V |
| C1803 | 1-137-368-11 | FILM | 0.0047MF | 5% | 50V |
| C1804 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C1807 | 1-137-366-11 | FILM | 0.0022MF | 5% | 50V |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN1801 | 1-573-299-21 | CONNECTOR, BOARD TO BOARD 10P |
| CN1803 | *1-568-878-51 | PIN, CONNECTOR 3P |

< DIODE >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| D1802 | 8-719-110-17 | DIODE RD10ESB2 |

< IC >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| IC1801 | 8-759-701-59 | IC NJM78M09FA |
| IC1802 | 8-759-603-37 | IC M5216P |

< LINK IC >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| JW1802 ⚠ | 1-532-605-91 | LINK, IC 0.4A (ICP-F10) |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | | | |
|---|---|---|---|---|---|
| R1807 | 1-247-883-00 | CARBON | 150K | 5% | 1/4W |
| R1809 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R1810 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R1811 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R1812 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| | *A-1642-174-A | D BOARD, COMPLETE<br>***************** | | | |
| | 4-201-023-01 | SPACER, INSULATING | | | |
| | 4-202-373-01 | SPRING, IC | | | |
| | *4-203-258-01 | HOLDER, LED | | | |
| | | < CAPACITOR > | | | |
| C502 | 1-102-824-00 | CERAMIC | 470PF | 5% | 50V |
| C503 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C504 | 1-102-824-00 | CERAMIC | 470PF | 5% | 50V |
| C506 | 1-126-941-11 | ELECT | 470MF | 20% | 25V |
| C507 | 1-109-953-11 | ELECT | 2.2MF | 20% | 50V |
| C509 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C510 | 1-126-969-11 | ELECT | 220MF | 20% | 50V |
| C511 | 1-136-202-11 | FILM | 0.33MF | 5% | 63V |
| C513 | 1-106-220-00 | MYLAR | 0.1MF | 10% | 100V |
| C514 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C515 | 1-126-941-11 | ELECT | 470MF | 20% | 25V |
| C517 | 1-126-941-11 | ELECT | 470MF | 20% | 25V |
| C518 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C519 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C520 | 1-126-941-11 | ELECT | 470MF | 20% | 25V |
| C521 | 1-107-698-11 | ELECT | 10MF | 20% | 25V |
| C522 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C523 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C600 ⚠ | 1-113-890-51 | ELECT | 0.0022MF | 20% | 250V |
| C601 ⚠ | 1-161-964-91 | CERAMIC | 0.0047MF | | 250V |
| C602 ⚠ | 1-161-964-91 | CERAMIC | 0.0047MF | | 250V |
| C603 | 1-125-555-11 | ELECT | 330MF | 20% | 400V |
| C604 | 1-126-968-11 | ELECT | 100MF | 20% | 50V |
| C605 | 1-107-929-11 | ELECT | 10MF | 20% | 100V |
| C606 | 1-162-318-11 | CERAMIC | 0.001MF | 10% | 500V |
| C607 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C608 | 1-109-880-11 | FILM | 0.0015MF | 3% | 2KV |
| C611 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C612 | 1-111-160-11 | ELECT | 22MF | 20% | 100V |
| C613 | 1-124-347-00 | ELECT | 100MF | 20% | 160V |
| C614 | 1-128-526-11 | ELECT | 100MF | 20% | 25V |
| C615 | 1-111-067-11 | ELECT | 0.001MF | 20% | 25V |
| C616 | 1-111-067-11 | ELECT | 0.001MF | 20% | 25V |
| C617 | 1-128-339-11 | ELECT | 2200MF | 20% | 16V |
| C618 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C619 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C620 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C621 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C622 | 1-107-925-11 | ELECT | 1MF | 20% | 100V |
| C623 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C624 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C625 | 1-126-967-11 | ELECT | 47MF | 20% | 50V |
| C626 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C628 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C629 | 1-111-097-11 | ELECT | 2200MF | 20% | 35V |
| C630 | 1-111-097-11 | ELECT | 2200MF | 20% | 35V |
| C631 | 1-126-965-11 | ELECT | 22MF | 20% | 50V |
| C632 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C633 ⚠ | 1-107-564-11 | FILM | 0.22MF | 20% | 300V |
| C634 ⚠ | 1-107-564-11 | FILM | 0.22MF | 20% | 300V |
| C635 ⚠ | 1-107-564-11 | FILM | 0.22MF | 20% | 300V |
| C636 ⚠ | 1-113-890-51 | ELECT | 0.0022MF | 20% | 250V |
| C638 | 1-136-203-11 | FILM | 0.01MF | 5% | 630V |

| REF.NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| C640 | 1-106-220-00 | MYLAR | 0.1MF | 10% | 100V |
| C644 | 1-137-043-11 | FILM | 0.0047MF | 10% | 400V |
| C647 | 1-162-116-00 | CERAMIC | 680PF | 10% | 2KV |
| C651 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C800 | 1-137-368-11 | FILM | 0.0047MF | 5% | 50V |
| C801 | 1-137-372-11 | FILM | 0.022MF | 5% | 50V |
| C802 | 1-136-161-00 | FILM | 0.047MF | 5% | 50V |
| C804 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C805 | 1-136-207-11 | FILM | 0.047MF | 10% | 250V |
| C806 | 1-104-999-11 | MYLAR | 0.1MF | 10% | 200V |
| C807 | 1-136-109-00 | FILM | 0.68MF | 5% | 200V |
| C808 | 1-137-205-11 | FILM | 0.1MF | 5% | 400V |
| C810 | 1-107-683-11 | ELECT | 2.2MF | | 250V |
| C811 | 1-102-212-00 | CERAMIC | 820PF | 10% | 500V |
| C812 | 1-136-125-00 | FILM | 0.68MF | 5% | 400V |
| C813 | 1-129-722-00 | FILM | 0.047MF | 10% | 630V |
| C814 | 1-136-565-11 | FILM | 0.015MF | 3% | 1.4KV |
| C815 | 1-136-562-11 | MYLAR | 0.0082MF | 10% | 400V |
| C816 | 1-161-754-00 | CERAMIC | 0.001MF | 10% | 2KV |
| C817 | 1-161-754-00 | CERAMIC | 0.001MF | 10% | 2KV |
| C818 | 1-162-134-11 | CERAMIC | 470PF | 10% | 2KV |
| C819 | 1-136-208-11 | FILM | 0.068MF | 10% | 250V |
| C820 | 1-102-114-00 | CERAMIC | 470PF | 10% | 50V |
| C821 | 1-162-114-00 | CERAMIC | 0.0047MF | | 2KV |
| C822 | 1-107-662-11 | ELECT | 22MF | 20% | 250V |
| C824 | 1-123-024-21 | ELECT | 33MF | | 160V |
| C829 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C830 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C832 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C834 | 1-128-551-11 | ELECT | 22MF | 20% | 25V |
| C835 | 1-162-318-11 | CERAMIC | 0.001MF | 10% | 500V |
| C836 | 1-162-117-00 | CERAMIC | 100PF | 10% | 500V |
| C838 | 1-102-228-00 | CERAMIC | 470PF | 10% | 500V |
| C839 | 1-136-207-11 | FILM | 0.047MF | 10% | 250V |
| C845 | 1-102-115-00 | CERAMIC | 560PF | 10% | 50V |
| C901 | 1-101-810-00 | CERAMIC | 100PF | 5% | 500V |
| C902 | 1-137-372-11 | FILM | 0.022MF | 5% | 50V |
| C903 | 1-137-372-11 | FILM | 0.022MF | 5% | 50V |
| C904 | 1-104-665-11 | ELECT | 100MF | 20% | 25V |
| C905 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C906 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C907 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C908 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C911 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C913 | 1-101-810-00 | CERAMIC | 100PF | 5% | 500V |
| C914 | 1-101-004-00 | CERAMIC | 0.01MF | | 50V |
| C915 | 1-136-166-00 | FILM | 0.12MF | 5% | 50V |
| C1200 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C1201 | 1-136-173-00 | FILM | 0.47MF | 5% | 50V |
| C1202 | 1-136-173-00 | FILM | 0.47MF | 5% | 50V |
| C1203 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C1204 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C1205 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C1206 | 1-101-005-00 | CERAMIC | 0.022MF | | 50V |
| C1207 | 1-126-933-11 | ELECT | 100MF | 20% | 16V |
| C1208 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C1209 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C1212 | 1-162-318-11 | CERAMIC | 0.001MF | 10% | 500V |
| C1213 | 1-162-318-11 | CERAMIC | 0.001MF | 10% | 500V |
| C1214 | 1-126-933-11 | ELECT | 100MF | 20% | 16V |

**D**

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| C1215 | 1-136-173-00 | FILM 0.47MF 5% | 50V |
| C1216 | 1-137-366-11 | FILM 0.0022MF 5% | 50V |
| C1217 | 1-137-366-11 | FILM 0.0022MF 5% | 50V |
| C1218 | 1-126-935-11 | ELECT 470MF 20% | 16V |
| | | < CONNECTOR > | |
| CN600 | ⚠ 1-508-786-00 | PIN, CONNECTOR (5MM PITCH) 2P | |
| CN601 | ⚠ 1-508-765-11 | PIN, CONNECTOR (5MM PITCH) 3P | |
| CN603 | ⚠ *1-580-844-11 | PIN, CONNECTOR (POWER) | |
| CN800 | *1-580-798-11 | CONNECTOR PIN (DY) 6P | |
| CN801 | *1-573-296-21 | CONNECTOR, BOARD TO BOARD 10P | |
| CN803 | 1-695-915-11 | TAB (CONTACT) | |
| CN804 | 1-778-037-11 | PIN, CONNECTOR 6P | |
| CN900 | 1-568-678-11 | TERMINAL BLOCK, S 3P | |
| CN902 | 1-695-299-11 | CONNECTOR, BOARD TO BOARD 50P | |
| CN1401 | *1-568-880-51 | PIN, CONNECTOR 5P | |
| CN1403 | 1-564-511-11 | PIN, CONNECTOR 8P | |
| CN1408 | *1-568-879-11 | PIN, CONNECTOR 4P | |
| | | < DIODE > | |
| D500 | 8-719-109-85 | DIODE RD5.1ES-B2 | |
| D502 | 8-719-979-85 | DIODE EGP20G | |
| D503 | 8-719-979-85 | DIODE EGP20G | |
| D504 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D505 | 8-719-982-03 | DIODE MTZJ-3.6A | |
| D506 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D507 | 8-719-109-85 | DIODE RD5.1ES-B2 | |
| D600 | 8-719-510-53 | DIODE D4SB60L | |
| D601 | 8-719-046-77 | DIODE EM1-V1 | |
| D603 | 8-719-109-97 | DIODE RD6.8ES-B2 | |
| D604 | 8-719-046-75 | DIODE EU-1-V1 | |
| D605 | 8-719-302-43 | DIODE EL1Z | |
| D606 | 8-719-302-43 | DIODE EL1Z | |
| D607 | 8-719-046-78 | DIODE EG-1Z-V1 | |
| D608 | 8-719-302-06 | DIODE EU2A | |
| D609 | 8-719-301-64 | DIODE RU4DS | |
| D610 | 8-719-046-74 | DIODE AU-01Z-V1 | |
| D611 | 8-719-045-48 | DIODE FML-G12S | |
| D612 | 8-719-046-76 | DIODE RU3YX-V1 | |
| D613 | 8-719-045-48 | DIODE FML-G12S | |
| D614 | 8-719-045-48 | DIODE FML-G12S | |
| D615 | 8-719-046-75 | DIODE EU-1-V1 | |
| D616 | 8-719-110-03 | DIODE RD7.5ESB2 | |
| D617 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D618 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D619 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D620 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D622 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D625 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D626 | 8-719-046-74 | DIODE AU-01Z-V1 | |
| D631 | 8-719-109-93 | DIODE RD6.2ESB2 | |
| D800 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D801 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D802 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D803 | 8-719-908-03 | DIODE GP08D | |
| D807 | 8-719-302-43 | DIODE EL1Z | |
| D808 | 8-719-908-03 | DIODE GP08D | |
| D809 | 8-719-018-82 | DIODE RGP02-20EL-6394 | |
| D810 | 8-719-302-43 | DIODE EL1Z | |
| D812 | 8-719-038-49 | DIODE FMS-3FU-LF027-1 | |

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D815 | 8-719-908-03 | DIODE GP08D | |
| D817 | 8-719-109-85 | DIODE RD5.1ES-B2 | |
| D901 | 8-719-030-11 | DIODE SLA-570KT3F | |
| D902 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D903 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D904 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D905 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D906 | 8-719-923-60 | DIODE MTZJ-T-77-9.1A | |
| D1201 | 8-719-109-72 | DIODE RD3.9ES-B2 | |
| | | < FUSE > | |
| F601 | ⚠ 1-576-232-21 | FUSE (H.B.C.) 5A/250V | |
| | ⚠ 1-533-230-11 | HOLDER, FUSE ;F601 | |
| | | < FERRITE BEAD > | |
| FB600 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB601 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB602 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB604 | 1-410-396-41 | FERRITE BEAD INDUCTOR 0.45UH | |
| FB605 | 1-410-396-41 | FERRITE BEAD INDUCTOR 0.45UH | |
| FB606 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB607 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB608 | 1-410-396-41 | FERRITE BEAD INDUCTOR 0.45UH | |
| FB800 | 1-410-396-41 | FERRITE BEAD INDUCTOR 0.45UH | |
| | | < IC > | |
| IC500 | 8-759-192-71 | IC STV9379 | |
| IC600 | 8-749-010-92 | IC STR-S6709 | |
| IC601 | ⚠ 8-749-924-92 | IC TLP721(D4-) | |
| IC602 | 8-749-920-61 | IC SE-135N | |
| IC603 | 8-759-144-82 | IC µPC2405HF | |
| IC604 | 8-759-510-52 | IC TEA7605 | |
| IC606 | 8-759-267-25 | IC LM2940T-9.0 | |
| IC800 | 8-759-103-93 | IC µPC393C | |
| IC900 | 8-747-905-11 | RAY CATCHER ELEMENT SBX1790-51 | |
| IC901 | 8-749-012-12 | IC IS474 | |
| IC1200 | 8-759-250-68 | IC TDA7264 | |
| IC1201 | 8-759-502-21 | IC TDA2822M | |
| | | < JACK SOCKET > | |
| J900 | 1-764-606-11 | JACK | |
| J1200 | 1-764-767-11 | JACK, PIN | |
| | | < COIL > | |
| L502 | 1-412-519-11 | INDUCTOR 3.3UH | |
| L503 | 1-412-519-11 | INDUCTOR 3.3UH | |
| L609 | 1-412-533-21 | INDUCTOR 47UH | |
| L611 | 1-412-527-11 | INDUCTOR 15UH | |
| L612 | 1-412-522-41 | INDUCTOR 5.6UH | |
| L613 | 1-412-522-41 | INDUCTOR 5.6UH | |
| L615 | 1-412-529-11 | INDUCTOR 22UH | |
| L616 | 1-412-533-21 | INDUCTOR 47UH | |
| L801 | 1-459-111-00 | COIL, DRAM CORE (CDI) | |
| L802 | 1-459-104-00 | COIL, WITH CORE | |
| L803 | 1-420-872-00 | COIL, AIR-CORE | |
| L804 | 1-406-903-11 | COIL, HORIZONTAL LINEARITY | |
| L805 | 1-406-675-11 | COIL, CHOKE 4.7MMH | |
| L809 | 1-412-533-21 | INDUCTOR 47UH | |
| L811 | 1-406-979-11 | COIL, CHOKE 220UH | |
| L813 | 1-412-552-11 | INDUCTOR 2.2MMH | |

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety. Replace only with the part number specified.

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| L901 | 1-408-603-31 | INDUCTOR | 10UH | | | |
| L902 | 1-408-603-31 | INDUCTOR | 10UH | | | |
| L903 | 1-408-409-00 | INDUCTOR | 10UH | | | |
| L904 | 1-408-409-00 | INDUCTOR | 10UH | | | |

< IC LINK >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| PS600 ⚠ | 1-532-686-91 | LINK, IC 2.7A (ICP-F75) | |
| PS601 ⚠ | 1-532-686-91 | LINK, IC 2.7A (ICP-F75) | |
| PS602 ⚠ | 1-532-686-91 | LINK, IC 2.7A (ICP-F75) | |
| PS603 ⚠ | 1-532-686-91 | LINK, IC 2.7A (ICP-F75) | |

< TRANSISTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| Q501 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q502 | 8-729-119-76 | TRANSISTOR 2SA1175-HFE | |
| Q503 | 8-729-900-89 | TRANSISTOR DTC144ES | |
| Q601 | 8-729-025-04 | TRANSISTOR 2SC3852A | |
| Q602 | 8-729-320-28 | TRANSISTOR 2SA1667 | |
| Q603 | 8-729-805-05 | TRANSISTOR 2SC3601-E | |
| Q604 | 8-729-024-35 | TRANSISTOR 2SC2808STP-R | |
| Q605 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q606 | 8-729-900-65 | TRANSISTOR DTA144ES | |
| Q607 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q800 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q801 | 8-729-017-06 | TRANSISTOR 2SC4793 | |
| Q802 | 8-729-016-32 | TRANSISTOR 2SC4927-01 | |
| Q803 | 8-729-119-80 | TRANSISTOR 2SC2688-LK | |
| Q805 | 8-729-900-89 | TRANSISTOR DTC144ES | |
| Q900 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1200 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1201 | 8-729-900-74 | TRANSISTOR DTC143TS | |
| Q1202 | 8-729-900-80 | TRANSISTOR DTC114ES | |
| Q1203 | 8-729-900-74 | TRANSISTOR DTC143TS | |
| Q1204 | 8-729-900-74 | TRANSISTOR DTC143TS | |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R500 | 1-215-457-00 | METAL | 33K | 1% | 1/4W | |
| R502 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R503 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R504 | 1-215-455-00 | METAL | 27K | 1% | 1/4W | |
| R505 | 1-249-382-11 | CARBON | 1.2 | 5% | 1/4W | F |
| R506 | 1-215-439-00 | METAL | 5.6K | 1% | 1/4W | |
| R507 | 1-215-888-00 | METAL OXIDE | 220 | 5% | 2W | F |
| R508 | 1-216-371-00 | METAL OXIDE | 1.5 | 5% | 2W | F |
| R509 | 1-249-443-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R510 | 1-249-443-11 | CARBON | 0.47 | 5% | 1.4W | F |
| R520 | 1-215-457-00 | METAL | 33K | 1% | 1/4W | |
| R521 | 1-215-455-00 | METAL | 27K | 1% | 1/4W | |
| R522 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R523 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R524 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R525 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R526 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R527 | 1-215-437-00 | METAL | 4.7K | 1% | 1/4W | |
| R600 | 1-216-490-11 | METAL OXIDE | 39K | 5% | 3W | F |
| R601 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R602 | 1-215-473-00 | FILM | 150K | 15 | 1/4W | |
| R603 | 1-215-898-11 | METAL OXIDE | 10K | 5% | 2W | F |
| R604 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R605 | 1-216-362-11 | METAL OXIDE | 0.27 | 5% | 2W | F |
| R607 | 1-216-421-11 | METAL OXIDE | 12 | 5% | 1W | F |

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R608 | 1-216-365-00 | METAL OXIDE | 0.47 | 5% | 2W | F |
| R610 | 1-215-421-00 | METAL | 1K | 1% | 1/4W | |
| R611 | 1-216-354-11 | METAL OXIDE | 2.7 | 5% | 1W | F |
| R612 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R613 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R614 | 1-215-877-11 | METAL OXIDE | 22K | 5% | 1W | F |
| R615 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R616 | 1-215-471-00 | METAL | 120K | 1% | 1/4W | |
| R617 | 1-215-901-00 | METAL OXIDE | 33K | 5% | 2W | F |
| R618 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R619 | 1-216-425-11 | METAL OXIDE | 56 | 5% | 1W | F |
| R620 | 1-260-131-11 | CARBON | 470K | 5% | 1/2W | |
| R621 | 1-216-425-11 | METAL OXIDE | 56 | 5% | 1W | F |
| R622 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R623 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R624 | 1-249-393-11 | CARBON | 10 | 5% | 1/4W | F |
| R625 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R626 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R627 | 1-216-347-11 | METAL OXIDE | 0.68 | 5% | 1W | F |
| R628 | 1-249-415-11 | CARBON | 680 | 5% | 1/4W | F |
| R629 ⚠ | 1-244-945-91 | CARBON | 1M | 5% | 1.2W | |
| R630 ⚠ | 1-218-265-21 | METAL | 8.2M | 5% | 1W | |
| R631 ⚠ | 1-205-949-11 | WIREWOUND | 1.8 | 5% | 10W | |
| R632 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R633 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R634 | 1-249-397-11 | CARBON | 22 | 5% | 1/4W | F |
| R635 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R636 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R637 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W | |
| R638 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R639 | 1-215-439-00 | METAL | 5.6K | 1% | 1/4W | |
| R642 ⚠ | 1-205-949-11 | WIREWOUND | 1.8 | 5% | 10W | |
| R645 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W | |
| R646 | 1-249-377-11 | CARBON | 0.47 | 5% | 1/4W | F |
| R647 | 1-202-933-61 | FUSIBLE | 0.1 | 10% | 1/2W | F |
| R649 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | F |
| R800 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R802 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R803 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W | |
| R805 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R809 | 1-247-891-00 | CARBON | 330K | 5% | 1/4W | |
| R812 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R813 | 1-215-867-00 | METAL OXIDE | 470 | 5% | 1W | F |
| R814 | 1-249-411-11 | CARBON | 330 | 5% | 1/4W | |
| R816 | 1-215-917-11 | METAL OXIDE | 1K | 5% | 3W | F |
| R817 | 1-216-481-11 | METAL OXIDE | 1.2K | 5% | 3W | F |
| R818 | 1-215-882-00 | METAL OXIDE | 22 | 5% | 2W | F |
| R819 | 1-216-345-11 | METAL OXIDE | 0.47 | 5% | 1W | F |
| R820 | 1-249-403-11 | CARBON | 68 | 5% | 1/4W | |
| R821 | 1-215-909-11 | METAL OXIDE | 47 | 5% | 3W | F |
| R822 | 1-215-868-00 | METAL OXIDE | 680 | 5% | 1W | F |
| R824 | 1-249-420-11 | CARBON | 1.8K | 5% | 1/4W | |
| R826 | 1-247-752-11 | CARBON | 1K | 5% | 1/2W | |
| R827 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R828 | 1-249-430-11 | CARBON | 12K | 5% | 1/4W | |
| R829 | 1-249-493-11 | CARBON | 56K | 5% | 1/2W | |
| R830 | 1-217-778-11 | FUSIBLE | 1K | 5% | 1W | F |
| R833 | 1-247-887-00 | CARBON | 220K | 5% | 1/4W | |
| R835 | 1-216-471-11 | METAL OXIDE | 27 | 5% | 3W | F |
| R836 | 1-249-439-11 | CARBON | 68K | 5% | 1/4W | |

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R837 | 1-249-427-11 | CARBON | 6.8K | 5% | 1/4W | |
| R840 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R841 | 1-249-418-11 | CARBON | 1.2K | 5% | 1/4W | |
| R842 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | F |
| R843 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W | F |
| R846 | 1-247-885-00 | CARBON | 180K | 5% | 1/4W | |
| R847 | 1-247-895-91 | CARBON | 470K | 5% | 1/4W | |
| R849 | 1-249-429-11 | CARBON | 10K | 5% | 1.4W | |
| R850 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R851 | 1-215-898-11 | METAL OXIDE | 10K | 5% | 2W | F |
| R852 | 1-249-432-11 | CARBON | 18K | 5% | 1/4W | |
| R900 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W | |
| R901 | 1-247-734-11 | CARBON | 39 | 5% | 1/2W | |
| R902 | 1-247-734-11 | CARBON | 39 | 5% | 1/2W | |
| R904 | 1-249-389-11 | CARBON | 4.7 | 5% | 1/4W | F |
| R905 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R906 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R907 | 1-247-804-11 | CARBON | 75 | 5% | 1/4W | |
| R908 | 1-249-401-11 | CARBON | 47 | 5% | 1/4W | |
| R909 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R910 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W | |
| R911 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R912 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R913 | 1-247-863-91 | CARBON | 22K | 5% | 1/4W | |
| R914 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R919 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R921 | 1-249-437-11 | CARBON | 47K | 5% | 1/4W | |
| R922 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R923 | 1-249-412-11 | CARBON | 390 | 5% | 1/4W | |
| R924 | 1-202-731-00 | SOLID | 10M | 10% | 1/2W | |
| R925 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W | |
| R1200 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |
| R1201 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W | |
| R1202 | 1-249-389-11 | CARBON | 4.7 | 5% | 1.4W | F |
| R1203 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R1204 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R1205 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R1206 | 1-249-428-11 | CARBON | 8.2K | 5% | 1/4W | |
| R1207 | 1-249-413-11 | CARBON | 470 | 5% | 1.4W | |
| R1208 | 1-212-849-00 | FUSIBLE | 4.7 | 5% | 1/4W | F |
| R1209 | 1-212-849-00 | FUSIBLE | 4.7 | 5% | 1/4W | F |
| R1210 | 1-249-413-11 | CARBON | 470 | 5% | 1.4W | |
| R1211 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W | |
| R1212 | 1-249-424-11 | CARBON | 3.9K | 5% | 1/4W | |
| R1213 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W | |
| R1216 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W | |
| R1217 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |

< RELAY >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| RY600 | ⚠ 1-755-018-11 | RELAY |

< SWITCH >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| S601 | ⚠ 1-571-433-21 | SWITCH, PUSH (AC POWER) |
| S900 | 1-692-979-11 | SWITCH, TACTILE |
| S901 | 1-692-979-11 | SWITCH, TACTILE |
| S902 | 1-692-979-11 | SWITCH, TACTILE |

< SPARK GAP >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| SG801 | 1-519-422-11 | GAP, SPARK |

< TRANSFORMER >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| LF600 | ⚠ 1-421-776-21 | LFT | |
| LF601 | ⚠ 1-421-776-21 | LFT | |
| T601 | ⚠ 1-429-604-11 | TRANSFORMER, CONVERTER | |
| T800 | 1-424-545-11 | TRANSFORMER, FERRITE (PMT) | |
| T803 | ⚠ 1-453-169-11 | TRANSFORMER ASSY, FLYBACK (UX-1604A2) | |
| T804 | 1-437-090-31 | HDT | |

< THERMISTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| THP600 | ⚠ 1-809-827-11 | THERMISTOR, POSITIVE |

*****************************************************************

*A-1649-017-A K BOARD, COMPLETE
*****************

7-682-548-04 SCREW +P 3X8

< CAPACITOR >

| REF.NO. | PART NO. | DESCRIPTION | | | |
|---|---|---|---|---|---|
| C280 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C281 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C282 | 1-130-831-21 | MYLAR | 0.56MF | 10% | 63V |
| C283 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C284 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V |
| C285 | 1-124-557-11 | ELECT | 1000MF | 20% | 25V |
| C286 | 1-101-006-00 | CERAMIC | 0.047MF | | 50V |
| C287 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C288 | 1-102-074-00 | CERAMIC | 0.001MF | 10% | 50V |
| C289 | 1-126-962-11 | ELECT | 3.3MF | 20% | 50V |
| R287 | 1-101-006-00 | CERAMIC | 0.047MF | | 50V |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| CN223 | *1-568-878-51 | PIN, CONNECTOR 3P |
| CN225 | *1-564-511-11 | PLUG, CONNECTOR 8P |

< IC >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| IC271 | 8-759-988-94 | IC TDA2050 |

< TRANSISTOR >

| REF.NO. | PART NO. | DESCRIPTION |
|---|---|---|
| Q203 | 8-729-900-89 | TRANSISTOR DTC144ES |
| Q204 | 8-729-900-80 | TRANSISTOR DTC114ES |
| Q205 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | | | | REMARK |
|---|---|---|---|---|---|---|
| R280 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R281 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W | |
| R282 | 1-249-426-11 | CARBON | 5.6K | 5% | 1/4W | |
| R283 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W | |
| R284 | 1-249-440-11 | CARBON | 82K | 5% | 1/4W | |
| R285 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W | |
| R286 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R288 | 1-216-357-00 | METAL OXIDE | 4.7 | 5% | 1W | F |
| R289 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W | |
| R290 | 1-247-897-11 | CARBON | 560K | 5% | 1/4W | |
| R291 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W | |

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | *A-1651-087-A | J3 BOARD, COMPLETE<br>****************** | |

< CAPACITOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| C291 | 1-101-005-00 | CERAMIC 0.022MF | 50V |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| CN203 | *1-564-518-11 | PLUG, CONNECTOR 3P | |
| CN204 | 1-537-339-11 | TERMINAL BOARD | |

< COIL >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| L200 | 1-402-711-11 | INDUCTOR, WIDEBAND | |

****************************************************************

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | *A-1644-070-A | VM BOARD, COMPLETE<br>****************** | |
| | *4-368-683-11 | SPRING, TRANSISTOR | |
| | 4-382-854-11 | SCREW (M3X10), P, SW(+) | |

< CAPACITOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| C1701 | 1-126-933-11 | ELECT 100MF 20% | 16V |
| C1702 | 1-128-551-11 | ELECT 22MF 20% | 25V |
| C1703 | 1-126-933-11 | ELECT 100MF 20% | 16V |
| C1704 | 1-107-357-11 | FILM 0.47MF 5% | 100V |
| C1705 | 1-107-638-11 | ELECT 33MF 20% | 160V |
| C1706 | 1-104-999-11 | FILM 0.1MF 5% | 200V |
| C1707 | 1-137-397-11 | FILM 0.047MF 5% | 100V |
| C1708 | 1-137-364-11 | FILM 0.001MF 5% | 50V |
| C1709 | 1-137-364-11 | FILM 0.001MF 5% | 50V |
| C1710 | 1-102-074-00 | CERAMIC 0.001MF 10% | 50V |
| C1720 | 1-107-667-11 | ELECT 2.2MF 20% | 160V |
| C1721 | 1-137-397-11 | FILM 0.047MF 5% | 100V |
| C1722 | 1-126-934-11 | ELECT 220MF 20% | 16V |
| C1723 | 1-161-830-00 | CERAMIC 0.0047MF | 500V |
| C1725 | 1-128-551-11 | ELECT 22MF 20% | 25V |
| C1726 | 1-126-934-11 | ELECT 220MF 20% | 16V |

< CONNECTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| CN1015 | *1-568-880-51 | PIN, CONNECTOR 5P | |
| CN1718 | 1-774-418-11 | CONNECTOR, BOARD TO BOARD 8P | |

< DIODE >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D1701 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D1702 | 8-719-110-88 | DIODE RD39ES-B2 | |
| D1703 | 8-719-110-88 | DIODE RD39ES-B2 | |

< COIL >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| L1701 | 1-408-409-00 | INDUCTOR 10UH | |
| L1702 | 1-408-403-00 | INDUCTOR 3.3UH | |
| L1703 | 1-408-409-00 | INDUCTOR 10UH | |
| L1704 | 1-408-418-00 | INDUCTOR 56UH | |
| L1705 | 1-408-418-00 | INDUCTOR 56UH | |

< TRANSISTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| Q1701 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1702 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1703 | 8-729-017-05 | TRANSISTOR 2SA1837 | |
| Q1704 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1706 | 8-729-017-06 | TRANSISTOR 2SC4793 | |
| Q1708 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1709 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |

< RESISTOR >

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| R1701 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1702 | 1-249-417-11 | CARBON 1K 5% 1/4W | |
| R1703 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| R1704 | 1-249-415-11 | CARBON 680 5% 1/4W | |
| R1705 | 1-247-815-91 | CARBON 220 5% 1/4W | |
| R1706 | 1-247-815-91 | CARBON 220 5% 1/4W | |
| R1708 | 1-249-412-11 | CARBON 390 5% 1/4W | |
| R1712 | 1-260-311-11 | CARBON 39 5% 1/2W | |
| R1713 | 1-249-384-11 | CARBON 1.8 5% 1/4W | F |
| R1714 | 1-249-414-11 | CARBON 560 5% 1/4W | F |
| R1715 | 1-249-432-11 | CARBON 18K 5% 1/4W | |
| R1716 | 1-249-417-11 | CARBON 1K 5% 1/4W | F |
| R1717 | 1-216-476-11 | METAL OXIDE 180 5% 3W | F |
| R1718 | 1-249-432-11 | CARBON 18K 5% 1/4W | |
| R1719 | 1-249-384-11 | CARBON 1.8 5% 1/4W | F |
| R1720 | 1-249-400-11 | CARBON 39 5% 1/4W | F |
| R1721 | 1-249-414-11 | CARBON 560 5% 1/4W | |
| R1722 | 1-249-401-11 | CARBON 47 5% 1/4W | |
| R1724 | 1-249-400-11 | CARBON 39 5% 1/4W | |
| R1725 | 1-216-451-11 | METAL OXIDE 120 5% 2W | F |
| R1728 | 1-249-413-11 | CARBON 470 5% 1/4W | |
| R1729 | 1-249-413-11 | CARBON 470 5% 1/4W | |
| R1730 | 1-249-422-11 | CARBON 2.7K 5% 1/4W | |
| R1731 | 1-249-411-11 | CARBON 330 5% 1/4W | |

****************************************************************

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

The components identified by shading and marked ⚠ are critical for safety.
Replace only with the part number specified.

MISCELLANEOUS
`*************`

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | ⚠ 1-406-807-11 | COIL, DEGAUSSING | |
| | 1-452-032-00 | MAGNET, DISK; 10MM Ø | |
| | 1-452-094-00 | MAGNET, ROTATABLE DISK; 15MM Ø | |
| | ⚠ 1-453-169-11 | TRANSFORMER ASSY, FLYBACK(NX-1604A2) | |
| | 1-504-146-11 | SPEAKER (5x11CM) | |
| | ⚠ 1-571-433-21 | SWITCH, PUSH (AC POWER) | |
| | 1-693-338-11 | TUNER/VIF (AEP) (KV-29C2A/29C2D/29C2E/29C2K/29C2R) | |
| | 1-693-340-11 | TUNER.VIF (FR) (KV-29C2B) | |
| | ⚠ 1-751-680-11 | CORD, POWER (WITH NOISE FILTER) 2.5A/250V (KV-29C2A/29C2B/29C2D/29C2E) | |
| | ⚠ 1-690-270-21 | CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-29C2K/29C2R) | |
| | ⚠ 1-775-045-11 | CONNECTOR, DEFLECTION YOKE (DOUBLE) | |
| | ⚠ 8-451-467-31 | DEFLECTION YOKE (Y29GXA2-B2) | |
| | ⚠ 8-453-005-11 | NECK ASSY, PICTURE TUBE (NA297-M) | |
| V901 | ⚠ 8-733-856-05 | PICTURE TUBE (SD-269)(M68LCT60X) | |
| | ⚠ 8-733-856-51 | ITC 29GX2-A1 (NO LEAD) | |

`****************************************************************`

ACCESSORIES AND PACKING MATERIALS
`*********************************`

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | 1-544-767-11 | SPEAKER (13CM) | |
| | 1-696-554-11 | CABLE, SPEAKER (WITH PLUG) | |
| | 4-039-358-01 | SCREW (4X16), (+) BV TAPPING | |
| | *4-203-485-01 | CUSHION (LOWER) (ASSY) | |
| | *4-203-486-01 | CUSHION (RIGHT) (ASSY) | |
| | *4-203-487-01 | INDIVIDUAL CARTON | |
| | *4-395-957-01 | BAG, PROTECTION | |
| | 4-203-521-41 | MANUAL, INSTRUCTION (KV-29C2A)(ITALIAN) | |
| | 4-203-521-51 | MANUAL, INSTRUCTION (KV-29C2B) (FRENCH/GERMAN/ITALIAN/DUTCH) | |
| | 4-203-521-11 | MANUAL, INSTRUCTION (KV-29C2D) (DUTCH/GREEK/ENGLISH/GERMAN/TURKISH) | |
| | 4-203-521-71 | MANUAL, INSTRUCTION (KV-29C2E)(SPANISH) | |
| | 4-203-521-81 | MANUAL, INSTRUCTION (KV-29C2E) (PORTUGUESE/FINNISH/DANISH/NORWEGIAN/SWEDISH) | |
| | 4-203-521-91 | MANUAL, INSTRUCTION (KV-29C2K/29C2R) (CZECH/ENGLISH/POLISH/BULGARIAN/RUSSIAN) | |
| | A-1678-054-A | BOX ASSY, WOOFER | |

REMOTE COMMANDER
`****************`

| REF.NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | 1-473-692-11 | COMMANDER, STANDARD TYPE (RM-862) | |

`****************************************************************`